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DEPARTMENT OF DEFENSE IN-HOUSE RDT&E ACTIVITIES



30 OCTOBER 1988

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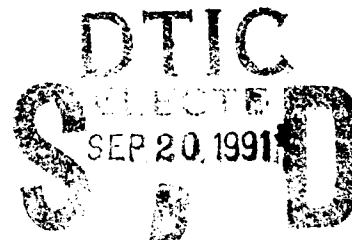


Management Analysis Report...

Department of the Army

Department of the Navy

Department of the Air Force



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DEPARTMENT OF DEFENSE IN-HOUSE RDTE ACTIVITIES REPORT

30 October 1988

Prepared for:

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FOREWORD

This report was prepared by the US Army Materiel Command at the direction of the Office of the Secretary of Defense. This edition is a continuation of the series of reports that was initiated in 1966.

Each In-House RDTE Activity of the Department of Defense is described on one page in this compilation. The data for 1988 are summarized in tables preceding the main text.

All current DOD RDTE Activities which meet the report requirement of having at least 25 percent of their budget in RDTE Funds are listed in the contents alphabetically within each military department. Some facilities which do not meet the requirement previously noted are also listed by special request. Organizational changes during FIE 1988 appear in Appendix I.

DOD Instruction 7700.9, which has been the basis of this report since its inception, has been replaced by a tri-service regulation, AR 70-63 NAVCOMPTIST, 7044.5E, AFR 80-26, DNA 7700.9A, entitled DOD In-House RDTE Annual Activities Report, 1 September 1981. Appendix II contains many of the definitions used in this report and is provided as an additional aid in use of the report. Appendix III defines selected abbreviations and acronyms. Appendix IV lists selected key words with page references.

Every effort has been made to provide accurate information, particularly fiscal and personnel data. All numbers and statements submitted by each listed organization have been thoroughly examined.

Considerably more data is accumulated in the data base than is published in this report, all data is used by numerous organizations such as the Department of Defense, Office of Technology Assessment, Army Audit Agency, various committees of the Congress, and the General Accounting Office among others. Availability of this data also allows timely and accurate information to be provided without continual recourse to the appropriate field activity.

It is desired that this publication be given widespread distribution in the DOD Laboratories as an internal management document at the Director and Commanding Officer level as well as at the bench level in order to allow personnel an opportunity to familiarize themselves with the functional capabilities of other DOD Laboratories. By this means laboratory scientists and engineers can be encouraged to communicate with each other on common problems of interest to their service laboratories as well as to communicate with laboratories of the other services.

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SUMMARY

DEPARTMENT OF DEFENSE IN-HOUSE RDT&E FACILITIES

PROGRAM DATA FOR FY 1988

	(MILLIONS)
TOTAL ANNUAL PROGRAM	16717.134
TOTAL INHOUSE PROGRAM	4792.460
TOTAL RDTE PROGRAM	11251.910
TOTAL INHOUSE RDT&E	3530.138
TOTAL ANNUAL OPERATING COST	1401.711

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONAL
MILITARY	22216	712	9040
CIVILIAN	73840	4243	36373
TOTAL	96056	4955	45413

PHYSICAL FACILITIES (END OF FY 1988)

ACRES	5961353
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SPACE (THOUSANDS OF SQUARE FEET)

LABORATORY	35162.582
ADMINISTRATIVE	12080.781
OTHER	55406.480
TOTAL	102649.843

COST (MILLIONS)

REAL PROPERTY	6353.967
EQUIPMENT	6494.488
TOTAL	12848.455

TABLE 1. ARMY RDT&E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1988

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA							
	TOTAL	TOTALS		TOTALS RDT&E	INHOUSE RDT&E	TOTAL MIL	TOTAL		PHD MIL	PHD CIV	PROF MIL	PROF CIV
		INHOUSE	RDT&E				CIV	MIL				
AEROMEDICAL RESEARCH LABORATORY ARMAMENT RESEARCH, DEVELOPMENT & ENGR CENTER ARMY RESEARCH OFFICE ATMOSPHERIC SCIENCES LABORATORY AVIATION DEVELOPMENT TEST ACTIVITY AVIATION ENGINEERING FLIGHT ACTIVITY AVIATION RESEARCH & TECH ACTIVITY (AVSCOM) AVIONICS R&D ACTIVITY BALLISTIC RESEARCH LABORATORY BELVOIR RDT&E CENTER BIOMEDICAL RESEARCH & DEVELOPMENT LAB CENTER FOR CMD, CONTROL, AND COMMUNICATIONS CENTER FOR ELECTRONIC WARFARE/RSTA CENTER FOR NIGHT VISION/ELECTRO-OPTICS CENTER FOR SIGNALS WARFARE CHEMICAL RESEARCH DEVELOPMENT AND ENGR CTR COLD REGIONS RESEARCH & ENGINEERING LAB COLD REGIONS TEST CENTER COMBAT SYSTEMS TEST ACTIVITY CONSTRUCTION ENGINEERING RESEACH LAB DUGWAY PROVING GROUND ELECTRONIC PROVING GROUND ELECTRONICS TECHNOLOGY AND DEVICES LAB ENGINEER TOPOGRAPHIC LABORATORIES ENGINEER WATERWAYS EXPR. STATION HARRY DIAMOND LABORATORIES HUMAN ENGINEERING LABORATORY INSTITUTE OF DENTAL RESEARCH INSTITUTE OF SURGICAL RESEARCH LETTERMAN ARMY INSTITUTE OF RESEARCH MATERIALS TECHNOLOGY LABORATORY MATERIEL SYSTEMS ANALYSIS ACTIVITY MEDICAL MATERIEL DEVELOPMENT ACTIVITY	11.916	6.522	8.766	6.441	69	67	14	11	44	29		
	242.300	400.800	201.800	83.700	83	3827	0	101	51	215		
	121.176	0.000	121.080	0.000	2	115	0	39	2	40		
	32.273	19.923	32.252	19.902	3	390	0	31	4	135		
	20.684	18.667	10.183	10.183	138	95	0	1	26	36		
	14.029	10.948	11.847	10.365	57	109	0	0	22	25		
	100.511	42.850	97.026	41.238	15	378	1	31	15	273		
	20.081	8.774	14.508	6.818	11	210	0	5	11	154		
	53.897	45.911	40.251	21.143	19	755	1	113	8	420		
	201.047	65.991	126.047	40.409	51	879	0	25	10	429		
	12.166	5.783	10.447	5.693	29	88	4	15	20	43		
	60.257	23.345	45.062	13.300	14	302	0	14	5	248		
	255.543	24.834	69.296	12.059	38	267	0	8	1	159		
	111.594	33.067	96.559	28.164	29	454	1	36	6	284		
	122.706	7.011	48.853	5.518	38	208	0	3	2	96		
	188.642	97.270	117.598	76.292	89	1048	2	70	42	630		
	22.218	18.995	13.488	11.195	11	304	0	39	6	124		
	16.005	7.768	7.768	7.768	99	32	0	0	36	13		
	75.415	66.139	58.811	38.089	219	1137	0	8	23	393		
	51.417	30.206	37.856	22.713	4	212	0	44	4	188		
	80.958	35.813	57.100	26.527	144	786	1	20	58	115		
	61.028	34.237	31.104	19.596	597	227	0	1	52	94		
	79.305	21.218	74.322	16.062	1	301	0	39	1	180		
	108.548	15.786	100.894	12.404	12	320	1	15	6	203		
	115.851	106.567	54.146	45.484	21	1517	1	133	12	679		
	141.264	51.329	120.488	42.784	3	640	2	43	3	406		
	23.663	13.393	23.166	13.096	36	169	4	16	17	120		
7.735	2.921	5.452	2.921	58	18	11	3	42	5			
11.732	5.117	5.349	4.118	153	78	17	4	56	23			
24.159	13.465	18.283	12.979	142	99	36	19	101	53			
50.149	50.211	35.249	35.249	9	557	0	70	9	255			
38.555	24.676	32.644	20.419	28	432	0	15	13	264			
60.787	4.284	59.129	4.284	23	34	8	3	18	10			

TABLE 1. ARMY RDT&E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1988

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA							
	TOTAL	TOTALS	TOTALS	INHOUSE	TOTAL	INHOUSE	TOTAL	TOTAL	PHD	PHD	PROF	PROF
			INHOUSE	RD&E	RD&E	MIL	RD&E	CIV	MIL	CIV	MIL	CIV
MEDICAL RESEARCH AND DEVELOPMENT COMMAND	17.375	8.095	12.687	8.090	60	181	18	4	53	24	69	
MEDICAL RESEARCH INST OF CHEMICAL DEFENSE	36.174	15.738	32.144	15.631	85	184	26	23	40	69	113	
MEDICAL RESEARCH INST OF INFECTIOUS DISEASES	57.499	24.675	47.061	24.187	293	262	52	46	102	743	440	
MISSILE RESEARCH, DEV, AND ENGR CNTR	376.862	105.270	289.662	68.056	42	1255	0	55	20	233	49	
NATICK RESEARCH, DEVELOPMENT AND ENGR CNTR	86.017	55.314	55.103	39.538	96	905	7	63	53	440	233	
RSCH INST FOR BEHAVIORAL & SOCIAL SCIENCES	69.553	23.690	63.459	23.343	16	313	2	161	18	50	413	
RSRCH INST OF ENVIRONMENTAL MEDICINE	10.156	6.717	7.111	6.619	72	81	15	28	19	183	220	
TANK AUTOMOTIVE RD&E CENTER	120.195	35.152	98.259	21.122	28	769	0	18	16	36	126	
TRADOC TEST AND EXPERIMENTATION COMMAND	82.568	42.062	35.455	35.455	663	552	0	1	5	126	232	
TROPIC TEST CENTER	5.764	5.764	3.599	0.000	69	62	0	2	304	638	1158	
VULNERABILITY ASSESSMENT LABORATORY	34.908	12.059	31.049	10.829	60	196	0	4	109	210		
WALTER REED ARMY INSTITUTE OF RESEARCH	76.031	52.812	48.769	46.849	433	547	98	68				
WHITE SANDS MISSILE RANGE	234.937	109.321	189.841	86.278	642	2371	18	68				
YUMA PROVING GROUND	80.244	32.348	59.534	28.849	256	594	0	3				
TOTALS	3825.894	1657.408	2760.557	1111.902	5060	24327	340	1521	2336	12359		

TABLE 2. ARMY ROT&E ACTIVITIES FACILITY DATA, FY 1988

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)				OTHER	REAL	
	ACRES	LABORATORY	ADMIN			PROPERTY	EQUIPMENT
AEROMEDICAL RESEARCH LABORATORY	53	87.668	10.120	FT. RUCKER, AL	67.006	7.759	10.660
ARMAMENT RESEARCH, DEVELOPMENT & ENGR CENTER	6487	267.806	1013.546	PICATINNY, NJ	2747.397	139.355	326.700
ARMY RESEARCH OFFICE	2	0.000	29.420	RSRCH TRIANGLE PRK, NC	0.000	0.000	1.207
ATMOSPHERIC SCIENCES LABORATORY	15	32.379	81.124	WHITE SNDS MSL RNG, NM	46.989	2.298	30.688
AVIATION DEVELOPMENT TEST ACTIVITY	1196	0.000	47.482	FORT RUCKER, AL	121.733	1.942	55.103
AVIATION ENGINEERING FLIGHT ACTIVITY	49	9.200	1.600	EDWARDS AFB, CA	124.000	4.315	40.195
AVIATION RESEARCH & TECH ACTIVITY (AVSCOM)	127	88.848	58.673	MOFFETT FIELD, CA	16.370	2.350	17.106
AVIONICS R&D ACTIVITY	2	52.450	13.665	FT. MONMOUTH, NJ	19.100	0.000	13.400
BALLISTIC RESEARCH LABORATORY	1958	0.000	123.000	ABERDEEN PRG GRD, MD	151.000	0.000	107.072
BELVOIR RD&E CENTER	1052	433.533	270.281	FT. BELVOIR, VA	84.902	20.238	37.451
BIOMEDICAL RESEARCH & DEVELOPMENT LAB	5	55.533	38.838	FT. DETRICK, MD	10.466	10.104	5.899
CENTER FOR CMD, CONTROL, AND COMMUNICATIONS	0	58.000	50.000	FT. MONMOUTH, NJ	4.000	0.000	14.977
CENTER FOR ELECTRONIC WARFARE/RSTA	225	70.777	90.037	FT. MONMOUTH, NJ	0.000	6.775	9.429
CENTER FOR NIGHT VISION/ELECTRO-OPTICS	0	30.000	44.473	FT. BELVOIR, VA	37.000	12.244	54.350
CENTER FOR SIGNALS WARFARE	0	13.492	50.794	WARRENTON, VIRGINIA	3.000	26.699	11.900
CHEMICAL RESEARCH DEVELOPMENT AND ENGR CTR	3471	734.690	291.063	ABERDEEN PVG GRD, MD	330.141	25.027	79.697
COLD REGIONS RESEARCH & ENGINEERING LAB	31	107.797	68.697	HANOVER, NH	126.506	16.743	15.940
COLD REGIONS TEST CENTER	125475	0.000	35.010	APO SEATTLE, WA (ALASKA)	100.005	11.125	13.960
COMBAT SYSTEMS TEST ACTIVITY	228650	720.999	4.351	ABERDEEN PVG GRD, MD	248.742	22.176	144.108
CONSTRUCTION ENGINEERING RESEARCH LAB	31	130.937	15.068	CHAMPAIGN, IL	25.905	8.200	27.756
DUGWAY PROVING GROUND	803364	139.987	200.000	DUGWAY, UTAH	1721.378	63.000	47.500
ELECTRONIC PROVING GROUND	34346	2.316	28.042	FT. HUACHUCA, AZ	314.227	13.518	2.500
ELECTRONICS TECHNOLOGY AND DEVICES LAB	0	92.040	47.000	FT. MONMOUTH, NJ	2.000	34.520	26.000
ENGINEER TOPOGRAPHIC LABORATORIES	0	121.772	9.749	FT. BELVOIR, VA	36.998	22.400	14.000
ENGINEER WATERWAYS EXPER. STATION	3073	1798.808	353.645	VICKSBURG, MS	176.809	59.300	61.809
HARRY DIAMOND LABORATORIES	2316	503.364	12.053	ADELPHI, MD	121.717	55.005	61.607
HUMAN ENGINEERING LABORATORY	72	111.524	7.055	ABERDEEN PVG GRD, MD	21.400	12.500	22.500
INSTITUTE OF DENTAL RESEARCH	0	10.852	5.696	WASHINGTON, DC	1.200	0.000	4.562
INSTITUTE OF SURGICAL RESEARCH	1	26.424	1.800	FT. SAM HOUSTON, TX	22.400	6.958	6.542
LETTERMAN ARMY INSTITUTE OF RESEARCH	9	119.204	56.941	PRESIDIO, SF, CA	112.174	46.450	13.115
MATERIALS TECHNOLOGY LABORATORY	48	424.773	42.010	WATERTOWN, MA	22.133	27.132	4.543
MATERIEL SYSTEMS ANALYSIS ACTIVITY	4	8.140	1.276	ABERDEEN PVG GRD, MD	1.715	2.870	2.500
MEDICAL MATERIEL DEVELOPMENT ACTIVITY	0	0.000	12.864	FT. DETRICK, MD	0.000	0.532	0.120

TABLE 2. ARMY ROT&E ACTIVITIES FACILITY DATA, FY 1988

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)				REAL		
	ACRES	LABORATORY	ADMIN	OTHER	PROPERTY	EQUIPMENT	
MEDICAL RESEARCH AND DEVELOPMENT COMMAND	0	0.000	71.136	0.000	1.800	3.800	
MEDICAL RESEARCH INST OF CHEMICAL DEFENSE	31	36.246	25.945	99.029	9.384	18.213	
MEDICAL RESEARCH INST OF INFECTIOUS DISEASES	388	104.136	26.618	205.841	21.103	25.139	
MISSILE RESEARCH, DEV, AND ENGR CNTR	15000	867.000	322.000	210.000	240.000	302.000	
NATICK RESEARCH, DEVELOPMENT AND ENGR CNTR	174	415.891	58.018	337.859	29.901	2.379	
RSCH INST FOR BEHAVIORAL & SOCIAL SCIENCES	0	55.155	14.000	6.200	0.724	8.961	
RSRCH INST OF ENVIRONMENTAL MEDICINE	1	46.621	6.163	24.790	4.084	10.092	
TANK AUTOMOTIVE RD&E CENTER	11	246.562	123.756	125.274	256.678	163.516	
TRADOC TEST AND EXPERIMENTATION COMMAND	22	19.900	41.000	0.000	6.200	3.040	
TROPIC TEST CENTER	2624	18.000	35.925	83.756	2.378	4.988	
VULNERABILITY ASSESSMENT LABORATORY	1316	85.030	38.516	77.654	5.884	66.000	
WALTER REED ARMY INSTITUTE OF RESEARCH	203	383.274	61.600	0.000	10.080	28.053	
WHITE SANDS MISSILE RANGE	1795861	1454.443	679.560	3048.239	248.798	276.048	
YUMA PROVING GROUND	837803	1.144	90.323	1520.259	75.322	144.076	
TOTALS	3865496	10364.682	4161.433	12557.314	1573.871	2341.241	

TABLE 3. NAVY RDT&E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1988

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL	TOTALS		TOTALS	INHOUSE	RDT&E	TOTAL	TOTAL		PHD	PHD	PROF	PROF	
		INHOUSE	RDT&E					MIL	CIV					MIL
AEROSPACE MEDICAL RESEARCH LABORATORY	7.476	5.798	5.633	5.633	5.633	39	51	12	13	18	30			
AIR DEVELOPMENT CENTER	335.326	192.000	230.384	230.384	137.856	235	2589	3	73	66	1539			
AIR PROPULSION CENTER	48.550	43.123	42.432	42.432	30.217	7	697	0	2	7	233			
AIR TEST CENTER	320.484	193.477	151.564	151.564	92.454	1731	2565	3	13	376	1976			
ATLANTIC FLEET WEAPONS TRAINING FACILITY	31.446	6.158	0.200	0.200	0.000	95	46	0	0	53	34			
BIODYNAMICS LABORATORY	3.567	2.480	2.594	2.594	2.382	36	36	4	4	8	14			
CIVIL ENGINEERING LABORATORY	48.658	39.095	31.041	31.041	24.253	17	412	0	28	5	227			
CLOTHING & TEXTILE RESEARCH FACILITY	3.972	3.404	1.732	1.732	1.353	1	62	0	1	1	51			
COASTAL SYSTEMS CENTER	122.585	76.450	72.816	72.816	45.804	118	1192	0	58	19	706			
DAVID W. TAYLOR NAVAL SHIP R&D CENTER	315.200	195.615	234.599	234.599	133.920	55	2783	2	113	21	1618			
DENTAL RESEARCH INSTITUTE	1.889	0.928	0.928	0.928	0.928	22	15	6	4	10	5			
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	6.531	3.852	5.687	5.687	3.543	12	58	0	15	5	44			
EXPLOSIVE ORDNANCE DISPOSAL TECH CEN	73.558	26.735	56.959	56.959	9.589	71	229	0	1	13	63			
HEALTH RESEARCH CENTER	5.681	3.417	4.408	4.408	3.417	25	62	12	14	14	30			
MEDICAL RESEARCH INSTITUTE	29.898	16.890	18.883	18.883	16.377	260	191	51	38	81	99			
MEDICAL RESEARCH UNIT NO.2	4.163	2.983	2.983	2.983	2.983	24	101	4	5	21	70			
MEDICAL RESEARCH UNIT NO.3	6.746	5.450	5.416	5.416	5.416	29	205	7	21	13	84			
NAVAL RESEARCH LABORATORY	316.506	262.655	242.188	242.188	189.435	112	3614	3	728	42	1554			
OCEAN RESEARCH & DEVELOPMENT CENTER	53.063	29.885	48.781	48.781	25.591	14	401	0	76	7	214			
OCEAN SYSTEMS CENTER	469.683	243.195	305.417	305.417	156.888	229	3087	0	190	76	1580			
OFFICE OF NAVAL RESEARCH/TECHNOLOGY	2460.328	42.729	2457.951	2457.951	42.729	37	447	4	101	34	156			
ORDNANCE MISSILE TEST STATION	9.549	4.330	4.400	4.400	0.883	94	68	0	0	8	6			
PACIFIC MISSILE TEST CENTER	552.210	373.389	199.234	199.234	139.464	1222	4144	0	13	0	1267			
PERSONNEL RESEARCH & DEVEL CENTER	33.406	18.658	21.136	21.136	11.184	23	271	0	71	16	196			
SUBMARINE MEDICAL RESEARCH LABORATORY	4.044	2.779	2.977	2.977	2.769	31	46	2	11	7	26			
SURFACE WEAPONS CENTER	593.927	315.579	335.086	335.086	167.755	116	5141	0	230	39	2565			
UNDERSEA RANGES DEPARTMENT	59.507	6.541	44.615	44.615	2.819	18	3	0	0	16	3			
UNDERWATER SYSTEMS CENTER	464.591	254.247	233.597	233.597	138.350	73	3520	2	114	69	2341			
WEAPONS CENTER	620.811	349.070	386.838	386.838	192.334	496	5100	0	145	33	1833			
WEAPONS EVALUATION FACILITY	14.666	10.804	4.634	4.634	4.030	109	132	0	0	40	39			
TOTALS	7018.021	2275.132	5155.113	5155.113	1590.356	5351	37268	115	2082	1118	18603			

TABLE 4. NAVY RDT&E ACTIVITIES FACILITY DATA, FY 1988

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	ACRES	LABORATORY	ADMIN	OTHER	REAL		
					PROPERTY	EQUIPMENT	
AEROSPACE MEDICAL RESEARCH LABORATORY	1	100.708	3.500	25.494	3.042	7.108	
AIR DEVELOPMENT CENTER	921	868.278	102.379	449.099	54.389	123.386	
AIR PROPULSION CENTER	68	488.390	27.962	92.816	52.190	11.135	
AIR TEST CENTER	7093	1201.309	481.977	4472.431	144.577	150.800	
ATLANTIC FLEET WEAPONS TRAINING FACILITY	3523	0.000	14.957	279.497	29.894	142.904	
BIODYNAMICS LABORATORY	1	25.845	23.149	1.276	0.000	3.613	
CIVIL ENGINEERING LABORATORY	32	139.230	25.256	51.514	15.560	11.089	
CLOTHING & TEXTILE RESEARCH FACILITY	2	12.660	10.200	5.630	2.000	2.500	
COASTAL SYSTEMS CENTER	1112	389.171	62.890	322.842	65.942	42.526	
DAVID W. TAYLOR NAVAL SHIP R&D CENTER	413	1728.000	100.000	292.000	80.542	138.234	
DENTAL RESEARCH INSTITUTE	1	21.264	6.001	9.318	0.000	1.384	
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	0	18.500	3.500	6.500	0.000	2.776	
EXPLOSIVE ORDNANCE DISPOSAL TECH CEN	1172	85.397	20.817	79.944	5.987	4.550	
HEALTH RESEARCH CENTER	1	19.052	7.159	0.000	0.147	2.207	
MEDICAL RESEARCH INSTITUTE	5	155.827	24.395	1.068	8.303	20.160	
MEDICAL RESEARCH UNIT NO.2	1	20.827	19.824	0.000	0.000	1.596	
MEDICAL RESEARCH UNIT NO.3	5	89.472	8.962	61.072	9.054	1.184	
NAVAL RESEARCH LABORATORY	1181	2689.754	196.018	290.576	137.970	262.061	
OCEAN RESEARCH & DEVELOPMENT CENTER	0	113.249	24.986	68.305	18.400	33.702	
OCEAN SYSTEMS CENTER	2267	1392.556	201.642	205.530	70.818	191.193	
OFFICE OF NAVAL RESEARCH/TECHNOLOGY	0	0.000	90.720	9.930	0.000	2.130	
ORDNANCE MISSILE TEST STATION	95	10.057	30.108	191.551	6.775	6.849	
PACIFIC MISSILE TEST CENTER	27093	1275.267	371.655	3440.819	211.441	208.582	
PERSONNEL RESEARCH & DEVEL CENTER	3	72.100	18.417	0.000	1.380	12.954	
SUBMARINE MEDICAL RESEARCH LABORATORY	1	40.514	14.099	0.000	1.315	2.976	
SURFACE WEAPONS CENTER	4084	1616.610	304.521	1176.514	136.100	295.241	
UNDERSEA RANGES DEPARTMENT	594	86.628	18.826	337.756	35.897	0.000	
UNDERWATER SYSTEMS CENTER	370	1162.833	203.746	544.099	59.166	118.903	
WEAPONS CENTER	1127266	2956.624	212.075	2861.210	285.722	165.981	
WEAPONS EVALUATION FACILITY	977	23.000	34.000	99.000	0.000	2.611	
TOTALS	1178282	16803.122	2663.741	15375.791	1436.611	1970.335	

TABLE 5. AIR FORCE RDT&E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1988

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL	TOTALS		INHOUSE RDT&E	TOTALS		INHOUSE RDT&E	TOTAL		TOTAL				
		INHOUSE	RDT&E		INHOUSE	RDT&E		MIL	CIV	PHD	MIL	CIV	PROF	CIV
AERO PROPULSION LABORATORY	142.847	20.234	141.127	20.234	20.234	141.127	20.234	56	319	6	31	48	234	
AEROSPACE MEDICAL RESEARCH LAB	43.030	24.472	39.213	22.498	22.498	39.213	22.498	120	156	13	32	66	105	
ARMAMENT DIVISION	1999.271	206.828	386.541	140.283	140.283	386.541	140.283	3056	1663	13	7	2801	845	
ARMAMENT LABORATORY (AFSC)	114.953	67.429	114.953	67.429	67.429	114.953	67.429	112	380	3	14	73	269	
ARNOLD ENGINEERING DEVELOPMENT CENTER	248.447	67.042	229.385	59.494	59.494	229.385	59.494	146	240	4	5	74	109	
ASTRONAUTICS LABORATORY	104.000	18.182	104.000	18.182	18.182	104.000	18.182	157	280	1	22	62	147	
AVIONICS LABORATORY	254.082	28.446	247.566	28.446	28.446	247.566	28.446	142	539	5	29	108	408	
EASTERN SPACE AND MISSILE CENTER	394.362	36.592	0.000	0.000	0.000	36.592	0.000	1050	1119	1	1	159	43	
ENGINEERING AND SERVICES LABORATORY	34.764	3.585	19.030	2.702	2.702	19.030	2.702	67	35	6	8	50	49	
FLIGHT DYNAMICS LABORATORY	163.156	32.248	156.245	32.172	32.172	156.245	32.172	165	595	4	34	112	428	
FLIGHT TEST CENTER	561.598	157.402	405.299	123.773	123.773	405.299	123.773	3471	2134	38	9	706	563	
FRANK J. SEILER RESEARCH LABORATORY	2.898	1.412	1.512	1.412	1.412	1.512	1.412	23	9	15	1	19	2	
GEOPHYSICS LABORATORY	104.165	32.617	98.916	31.586	31.586	98.916	31.586	117	447	3	97	43	262	
HUMAN RESOURCES LABORATORY	56.998	12.447	54.123	12.421	12.421	54.123	12.421	192	212	7	41	102	120	
MATERIALS LABORATORY	185.755	17.647	183.335	17.640	17.640	183.335	17.640	50	308	3	60	45	237	
OFFICE OF SCIENTIFIC RESEARCH	294.643	0.000	290.370	0.000	0.000	290.370	0.000	75	116	18	32	75	116	
ROME AIR DEVELOPMENT CENTER	431.414	61.038	338.764	49.041	49.041	338.764	49.041	193	1046	4	63	127	610	
SCHOOL OF AEROSPACE MEDICINE	58.317	17.844	24.027	13.448	13.448	24.027	13.448	334	253	52	39	118	100	
WEAPONS LABORATORY	369.699	72.997	344.412	72.750	72.750	344.412	72.750	548	547	31	66	372	316	
WESTERN SPACE AND MISSILE CENTER	93.123	87.514	0.000	0.000	0.000	87.514	0.000	541	522	4	0	188	121	
4950TH TEST WING	133.784	64.044	95.815	63.913	63.913	95.815	63.913	847	829	1	0	115	130	
6585TH TEST GROUP	61.971	34.319	45.470	34.319	34.319	45.470	34.319	251	293	0	1	76	99	
TOTALS	5853.277	843.783	3320.103	811.743	811.743	3320.103	811.743	11713	12042	232	592	5539	5313	

TABLE 6. AIR FORCE ROT&E ACTIVITIES FACILITY DATA, FY 1988

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL	
	ACRES	LABORATORY	ADMIN	OTHER	PROPERTY	EQUIPMENT
AERO PROPULSION LABORATORY	41	283.893	20.770	349.510	83.357	23.060
	WPAFB, OH					
AEROSPACE MEDICAL RESEARCH LAB	30	129.721	66.855	33.392	22.900	40.412
ARMAMENT DIVISION	456766	243.039	753.527	9734.282	346.532	534.381
ARMAMENT LABORATORY (AFSC)	0	157.096	85.138	29.683	0.000	26.844
ARNOLD ENGINEERING DEVELOPMENT CENTER	39081	1471.500	190.922	845.554	875.298	138.752
ASTRONAUTICS LABORATORY	68345	422.986	86.848	4.780	148.219	34.506
AVIONICS LABORATORY	200	238.012	14.715	409.889	78.212	67.645
EASTERN SPACE AND MISSILE CENTER	26138	212.871	1179.313	4864.445	384.300	426.600
ENGINEERING AND SERVICES LABORATORY	0	55.460	29.141	14.149	5.770	3.517
FLIGHT DYNAMICS LABORATORY	76	368.868	204.174	94.319	51.211	26.135
FLIGHT TEST CENTER	297438	192.293	301.174	8097.109	446.824	256.144
FRANK J. SEILER RESEARCH LABORATORY	0	16.956	1.849	0.000	1.923	3.487
GEOPHYSICS LABORATORY	336	395.732	14.821	25.883	12.350	45.066
HUMAN RESOURCES LABORATORY	5	73.837	71.350	42.514	10.721	122.182
MATERIALS LABORATORY	15	172.455	4.194	182.734	276.174	35.359
OFFICE OF SCIENTIFIC RESEARCH	0	0.000	35.688	5.128	0.000	0.991
ROME AIR DEVELOPMENT CENTER	1566	617.040	49.972	371.648	36.628	92.798
SCHOOL OF AEROSPACE MEDICINE	19575	426.071	90.023	182.231	54.174	28.902
WEAPONS LABORATORY	90	551.000	146.000	180.000	28.540	91.000
WESTERN SPACE AND MISSILE CENTER	421	1538.080	1224.352	844.146	227.000	0.000
4950TH TEST WING	400	20.800	97.700	1068.000	25.000	49.992
6585TH TEST GROUP	7052	407.068	39.081	93.979	228.352	135.139
TOTALS	917575	7994.778	4707.607	27473.375	3343.485	2182.912

TABLE 7. DEPARTMENT OF DEFENSE R&D ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1988

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA							
	TOTAL	TOTALS INHOUSE	TOTALS RDT&E	TOTALS RDT&E	INHOUSE RDT&E	TOTAL MIL	TOTAL CIV	PHD MIL	PHD CIV	PROF MIL	PROF CIV	
ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE	19.942	16.137	16.137	16.137	16.137	92	203	25	48	47	98	
TOTALS	19.942	16.137	16.137	16.137	16.137	92	203	25	48	47	98	

SUMMARY

DEPARTMENT OF DEFENSE IN-HOUSE R&D LABORATORIES

PROGRAM DATA FOR FY 1988

	(MILLIONS)
TOTAL ANNUAL PROGRAM	7325.186
TOTAL INHOUSE PROGRAM	2928.022
TOTAL RDTE PROGRAM	5452.470
TOTAL INHOUSE RDT&E	2145.118
TOTAL ANNUAL OPERATING COST	795.799

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONAL
MILITARY	5758	553	2871
CIVILIAN	42882	3451	22839
TOTAL	48640	4004	25710

PHYSICAL FACILITIES (END OF FY 1988)

ACRES	1256691
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SPACE (THOUSANDS OF SQUARE FEET)

LABORATORY	23047.305
ADMINISTRATIVE	5387.226
OTHER	11647.147
TOTAL	40081.678

COST (MILLIONS)

REAL PROPERTY	2669.799
EQUIPMENT	3169.462
TOTAL	5839.261

TABLE 1A. ARMY R&D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1988

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL	TOTALS		TOTALS RDT&E	INHOUSE RDT&E	TOTAL	TOTAL		PHD MIL	PHD CIV	PROF MIL	PROF CIV		
		INHOUSE	RDT&E				MIL	CIV						
AEROMEDICAL RESEARCH LABORATORY	11.916	6.522	8.766	6.441	69	67	14	11	44	29				
ARMAMENT RESEARCH, DEVELOPMENT & ENGR CENTER	242.300	400.800	201.800	83.700	83	3827	0	101	51	2158				
ATMOSPHERIC SCIENCES LABORATORY	32.273	19.923	32.252	19.902	3	390	0	31	4	135				
AVIATION RESEARCH & TECH ACTIVITY (AVSCOM)	100.511	42.850	97.026	41.238	15	378	1	31	15	273				
AVIONICS R&D ACTIVITY	20.081	8.774	14.508	6.818	11	210	0	5	11	154				
BALLISTIC RESEARCH LABORATORY	53.897	45.911	40.251	21.143	19	755	1	113	8	429				
BELVOIR RD&E CENTER	201.047	65.991	126.047	40.409	51	879	0	25	10	429				
BIOMEDICAL RESEARCH & DEVELOPMENT LAB	12.166	5.783	10.447	5.693	29	88	4	15	20	43				
CENTER FOR ELECTRONIC WARFARE/RSTA	255.543	24.834	69.296	12.059	38	267	0	8	1	159				
CENTER FOR NIGHT VISION/ELECTRO-OPTICS	111.594	33.067	96.559	28.164	29	454	1	36	6	284				
CENTER FOR SIGNALS WARFARE	122.706	7.011	48.853	5.518	38	208	0	3	2	96				
CHEMICAL RESEARCH DEVELOPMENT AND ENGR CTR	188.642	97.270	117.598	76.292	89	1048	2	70	42	630				
COLD REGIONS RESEARCH & ENGINEERING LAB	22.218	18.995	13.488	11.195	11	304	0	39	6	124				
CONSTRUCTION ENGINEERING RESEARCH LAB	51.417	30.206	37.856	22.713	4	212	0	44	4	188				
ELECTRONICS TECHNOLOGY AND DEVICES LAB	79.305	21.218	74.322	16.062	1	301	0	39	1	180				
ENGINEER TOPOGRAPHIC LABORATORIES	108.548	15.786	100.894	12.404	12	320	1	15	6	203				
ENGINEER WATERWAYS EXPER. STATION	115.851	106.567	54.146	45.484	21	1517	1	133	12	679				
HARRY DIAMOND LABORATORIES	141.264	51.329	120.488	42.784	3	640	2	43	3	406				
HUMAN ENGINEERING LABORATORY	23.663	13.393	23.166	13.096	36	169	4	16	17	120				
INSTITUTE OF DENTAL RESEARCH	7.735	2.921	5.452	2.921	58	18	11	3	42	5				
INSTITUTE OF SURGICAL RESEARCH	11.732	5.117	5.349	4.118	153	78	17	4	56	23				
LETTERMAN ARMY INSTITUTE OF RESEARCH	24.159	13.465	18.283	12.979	142	99	36	19	101	53				
MATERIALS TECHNOLOGY LABORATORY	50.149	50.211	35.249	35.249	9	557	0	70	9	255				
MEDICAL RESEARCH INST OF CHEMICAL DEFENSE	36.174	15.738	32.144	15.631	85	184	26	23	40	69				
MEDICAL RESEARCH INST OF INFECTIOUS DISEASES	57.499	24.675	47.061	24.187	293	262	52	46	102	113				
MISSILE RESEARCH, DEV, AND ENGR CNTR	376.862	105.270	289.662	68.056	42	1255	0	55	20	743				
NATICK RESEARCH, DEVELOPMENT AND ENGR CNTR	86.017	55.314	55.103	39.538	96	905	7	63	53	440				
RSCH INST FOR BEHAVIORAL & SOCIAL SCIENCES	69.553	23.690	63.459	23.343	16	313	2	161	18	233				
RSRCH INST OF ENVIRONMENTAL MEDICINE	10.156	6.717	7.111	6.619	72	81	15	28	50	49				
TANK AUTOMOTIVE RD&E CENTER	120.195	35.152	98.259	21.122	28	769	0	18	19	413				
WALTER REED ARMY INSTITUTE OF RESEARCH	76.031	52.812	48.769	46.849	433	547	98	68	304	232				
TOTALS	2821.204	1254.415	1993.664	811.727	1989	17102	295	1336	1077	9347				

TABLE 2A. ARMY R&D LABORATORIES FACILITY DATA, FY 1988

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)						
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT	
AEROMEDICAL RESEARCH LABORATORY	53	87.668	10.120	67.006	7.759	10.660	
ARMAMENT RESEARCH, DEVELOPMENT & ENGR CENTER	6487	267.806	1013.046	2747.397	139.355	326.700	
ATMOSPHERIC SCIENCES LABORATORY	15	32.379	81.124	46.989	2.298	30.688	
AVIATION RESEARCH & TECH ACTIVITY (AVSCOM)	127	88.848	58.673	16.370	2.350	17.106	
AVIONICS R&D ACTIVITY	2	52.450	13.665	19.100	0.000	13.400	
BALLISTIC RESEARCH LABORATORY	1958	378.000	123.000	151.000	0.000	107.072	
BELVOIR RD&E CENTER	1052	433.533	270.281	84.902	20.238	37.451	
BIOMEDICAL RESEARCH & DEVELOPMENT LAB	5	55.533	38.838	10.466	10.104	5.899	
CENTER FOR ELECTRONIC WARFARE/RSTA	225	70.744	90.037	0.000	6.775	9.469	
CENTER FOR NIGHT VISION/ELECTRO-OPTICS	0	30.000	44.473	37.000	12.244	54.350	
CENTER FOR SIGNALS WARFARE	0	13.492	50.794	3.000	26.699	11.900	
CHEMICAL RESEARCH DEVELOPMENT AND ENGR CTR	3471	734.690	291.063	330.141	25.027	79.697	
COLD REGIONS RESEARCH & ENGINEERING LAB	31	107.797	68.697	126.506	16.743	15.940	
CONSTRUCTION ENGINEERING RESEARCH LAB	31	130.937	15.068	25.905	8.200	27.756	
ELECTRONICS TECHNOLOGY AND DEVICES LAB	0	92.040	47.000	2.000	34.520	26.000	
ENGINEER TOPOGRAPHIC LABORATORIES	0	121.772	9.749	36.998	22.400	14.000	
ENGINEER WATERWAYS EXPER. STATION	3073	1798.808	353.645	176.809	59.300	61.809	
HARRY DIAMOND LABORATORIES	2316	503.364	12.053	121.717	55.005	61.607	
HUMAN ENGINEERING LABORATORY	72	111.524	7.055	21.400	12.500	22.500	
INSTITUTE OF DENTAL RESEARCH	0	10.852	5.696	1.200	0.000	4.562	
INSTITUTE OF SURGICAL RESEARCH	1	26.424	1.800	22.400	6.958	6.542	
LETTERMAN ARMY INSTITUTE OF RESEARCH	9	119.204	56.941	112.174	46.450	13.115	
MATERIALS TECHNOLOGY LABORATORY	48	424.773	42.010	22.133	27.132	4.543	
MEDICAL RESEARCH INST OF CHEMICAL DEFENSE	31	36.246	25.945	99.029	9.384	18.213	
MEDICAL RESEARCH INST OF INFECTIOUS DISEASES	388	104.136	26.618	205.841	21.103	25.139	
MISSILE RESEARCH, DEV, AND ENGR CNTR	15000	867.000	322.000	210.000	240.000	302.000	
NATICK RESEARCH, DEVELOPMENT AND ENGR CNTR	174	415.891	58.018	337.859	29.901	2.379	
RSCH INST FOR BEHAVIORAL & SOCIAL SCIENCES	0	55.155	14.000	6.200	0.724	8.961	
RSRCH INST OF ENVIRONMENTAL MEDICINE	1	46.621	6.163	24.790	4.084	10.092	
TANK AUTOMOTIVE RD&E CENTER	11	246.562	123.756	125.274	256.678	163.516	
WALTER REED ARMY INSTITUTE OF RESEARCH	203	383.274	61.600	0.000	10.080	28.053	
TOTALS	34784	7847.523	3342.928	5191.606	1114.011	1521.119	

TABLE 3A. NAVY R&D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1988

INSTALLATION	FUNDING DATA (MILLIONS \$)					PERSONNEL DATA									
	TOTAL	TOTALS		INHOUSE	RD&E	TOTAL	INHOUSE	RD&E	TOTAL		TOTAL		PROF	CIV	
		INHOUSE	RD&E						MIL	CIV	MIL	CIV			
AEROSPACE MEDICAL RESEARCH LABORATORY	7.476	5.798	5.633	5.633	5.633	39	51	12	13	18	30				
AIR PROPULSION CENTER	48.550	43.123	42.432	30.217	30.217	7	697	0	2	7	233				
BIODYNAMICS LABORATORY	3.567	2.480	2.594	2.382	2.382	36	36	4	4	8	14				
CIVIL ENGINEERING LABORATORY	48.658	39.095	31.041	24.253	24.253	17	412	0	28	5	227				
CLOTHING & TEXTILE RESEARCH FACILITY	3.972	3.404	1.732	1.353	1.353	1	62	0	1	1	51				
DAVID W. TAYLOR NAVAL SHIP R&D CENTER	315.200	195.615	234.599	133.920	133.920	55	2783	2	113	21	1618				
DENTAL RESEARCH INSTITUTE	1.889	0.928	0.928	0.928	0.928	22	15	6	4	10	5				
HEALTH RESEARCH CENTER	5.681	3.417	4.408	3.417	3.417	25	62	12	14	14	30				
MEDICAL RESEARCH INSTITUTE	29.898	16.890	18.883	16.377	16.377	260	191	51	38	81	99				
MEDICAL RESEARCH UNIT NO.2	4.163	2.983	2.983	2.983	2.983	24	101	4	5	21	70				
MEDICAL RESEARCH UNIT NO.3	6.746	5.450	5.416	5.416	5.416	29	205	7	21	13	84				
NAVAL RESEARCH LABORATORY	316.506	262.655	242.186	189.435	189.435	112	3614	3	728	42	1554				
OCEAN RESEARCH & DEVELOPMENT CENTER	53.063	29.885	48.781	25.591	25.591	14	401	0	76	7	214				
OCEAN SYSTEMS CENTER	469.683	243.195	305.417	156.888	156.888	229	3087	0	190	76	1580				
PERSONNEL RESEARCH & DEVEL CENTER	33.406	18.658	21.136	11.184	11.184	23	271	0	71	16	196				
SUBMARINE MEDICAL RESEARCH LABORATORY	4.044	2.779	2.977	2.769	2.769	31	46	2	11	7	26				
UNDERWATER SYSTEMS CENTER	464.591	254.247	233.597	138.350	138.350	73	3520	2	114	69	2341				
WEAPONS CENTER	620.811	349.070	386.838	192.334	192.334	496	5100	0	145	33	1833				
TOTALS	2437.904	1278.687	1591.583	943.430	943.430	1493	20654	105	1578	449	10205				

TABLE 4A. NAVY R&D LABORATORIES FACILITY DATA, FY 1988

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)				OTHER	REAL	
	ACRES	LABORATORY	ADMIN			PROPERTY	EQUIPMENT
AEROSPACE MEDICAL RESEARCH LABORATORY	1	100.708	3.500	PENSACOLA, FL.	25.494	3.042	7.108
AIR PROPULSION CENTER	68	488.390	27.962	TRENTON, NJ.	92.816	52.190	11.135
BIODYNAMICS LABORATORY	1	25.845	23.149	NEW ORLEANS, LA.	1.276	0.000	3.613
CIVIL ENGINEERING LABORATORY	32	139.230	25.256	PORT HUENEME, CA.	51.514	15.560	11.089
CLOTHING & TEXTILE RESEARCH FACILITY	2	12.660	10.200	NATICK, MA.	5.630	2.000	2.500
DAVID W. TAYLOR NAVAL SHIP R&D CENTER	413	1728.000	100.000	BETHESDA, MARYLAND	292.000	80.542	138.234
DENTAL RESEARCH INSTITUTE	1	21.264	6.001	NTC GREAT LAKES, IL.	9.318	0.000	1.384
HEALTH RESEARCH CENTER	1	19.052	7.159	SAN DIEGO, CA.	0.000	0.147	2.207
MEDICAL RESEARCH INSTITUTE	5	155.827	24.395	BETHESDA, MD.	1.068	8.303	20.160
MEDICAL RESEARCH UNIT NO.2	1	20.827	19.824	MANILA, PHILIPPINES	0.000	0.000	1.596
MEDICAL RESEARCH UNIT NO.3	5	89.472	8.962	CAIRO, EGYPT	61.072	9.054	1.184
NAVAL RESEARCH LABORATORY	1181	2689.754	196.018	WASHINGTON, DC	290.576	137.970	262.061
OCEAN RESEARCH & DEVELOPMENT CENTER	0	113.249	24.986	BAY ST LOUIS, MS.	68.305	18.400	33.702
OCEAN SYSTEMS CENTER	2267	1392.556	201.642	SAN DIEGO, CA.	205.530	70.818	191.193
PERSONNEL RESEARCH & DEVEL CENTER	3	72.100	18.417	SAN DIEGO, CA.	0.000	1.380	12.954
SUBMARINE MEDICAL RESEARCH LABORATORY	1	40.514	14.099	GROTON, CT.	0.000	1.315	2.976
UNDERWATER SYSTEMS CENTER	370	1162.833	203.746	NEWPORT, RI	544.099	59.166	118.903
WEAPONS CENTER	1127266	2956.624	212.075	CHINA LAKE, CA	2861.210	285.722	165.981
TOTALS	1131618	11228.905	1127.391		4509.908	745.609	987.980

TABLE 5A. AIR FORCE R&D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1988

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA								
	TOTAL	TOTALS		INHOUSE RDT&E	TOTALS RDT&E	INHOUSE RDT&E	TOTAL		PHD		PROF		
		INHOUSE	RDT&E				MIL	CIV	MIL	CIV	MIL	CIV	
AERO PROPULSION LABORATORY	142.847	20.234	141.127	20.234	20.234	56	319	6	31	48	234		
AEROSPACE MEDICAL RESEARCH LAB	43.030	24.472	39.213	22.498	22.498	120	156	13	32	66	105		
ARMAMENT LABORATORY (AFSC)	114.953	67.429	114.953	67.429	67.429	112	380	3	14	73	269		
ASTRONAUTICS LABORATORY	104.000	18.182	104.000	18.182	18.182	157	280	1	22	62	147		
AVIONICS LABORATORY	254.082	28.446	247.566	28.446	28.446	142	539	5	29	108	408		
ENGINEERING AND SERVICES LABORATORY	34.764	3.585	19.030	2.702	2.702	67	35	6	8	50	49		
FLIGHT DYNAMICS LABORATORY	163.156	32.248	156.245	32.172	32.172	165	595	4	34	112	428		
FRANK J. SEILER RESEARCH LABORATORY	2.898	1.412	1.512	1.412	1.412	23	9	15	1	19	2		
GEOPHYSICS LABORATORY	104.165	32.617	98.916	31.586	31.586	117	447	3	97	43	262		
HUMAN RESOURCES LABORATORY	56.998	12.447	54.123	12.421	12.421	192	212	7	41	102	120		
MATERIALS LABORATORY	185.755	17.647	183.335	17.640	17.640	50	308	3	60	45	237		
ROME AIR DEVELOPMENT CENTER	431.414	61.038	338.764	49.041	49.041	193	1046	4	63	127	610		
SCHOOL OF AEROSPACE MEDICINE	58.317	17.844	24.027	13.448	13.448	334	253	52	39	118	100		
WEAPONS LABORATORY	369.699	72.997	344.412	72.750	72.750	548	547	31	66	372	316		
TOTALS	2066.078	394.920	1867.223	389.961	389.961	2276	5126	153	537	1345	3287		

TABLE 6A. AIR FORCE R&D LABORATORIES FACILITY DATA, FY 1988

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)					
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
AERO PROPULSION LABORATORY	41	283.893	20.770	349.510	83.357	23.060
AEROSPACE MEDICAL RESEARCH LAB	30	129.721	66.855	33.392	22.900	40.412
ARMAMENT LABORATORY (AFSC)	0	157.096	85.138	29.683	0.000	26.844
ASTRONAUTICS LABORATORY	68345	422.986	86.848	4.780	148.219	34.506
AVIONICS LABORATORY	200	238.012	14.715	409.889	78.212	67.645
ENGINEERING AND SERVICES LABORATORY	0	55.460	29.141	14.149	5.770	3.517
FLIGHT DYNAMICS LABORATORY	76	368.868	204.174	94.319	51.211	26.135
FRANK J. SEILER RESEARCH LABORATORY	0	16.956	1.849	0.000	1.923	3.487
GEOPHYSICS LABORATORY	36	395.732	14.821	25.883	12.350	45.066
HUMAN RESOURCES LABORATORY	5	73.837	71.350	42.514	10.721	122.182
MATERIALS LABORATORY	15	172.455	4.194	182.734	276.174	35.359
ROME AIR DEVELOPMENT CENTER	1566	617.040	49.972	371.648	36.628	92.798
SCHOOL OF AEROSPACE MEDICINE	19575	426.071	90.023	182.231	54.174	28.902
WEAPONS LABORATORY	90	551.000	146.000	180.000	28.540	91.000
TOTALS	90279	3909.127	885.850	1920.732	810.179	640.913

TABLE 7A. DEPARTMENT OF DEFENSE R&D LABORATORIES FACILITY DATA, FY 1988

INSTALLATION	SPACE AND PROPERTY			COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			REAL		
	ACRES	LABORATORY	ADMIN	OTHER	PROPERTY	EQUIPMENT
ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE						
	10	61.750	31.057	24.901	0.000	19.450
TOTALS	10	61.750	31.057	24.901	0.000	19.450

INSTALLATION: AEROMEDICAL RESEARCH LABORATORY

FT RUCKER, AL

CDR: COL DUDLEY R. PRICE

DEP COMMANDER: COL J. D. LAMOTHE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	8.766	7.932
TOTAL PROCUREMENT	0.000	0.004
TOTAL O&M	0.081	0.153
TOTAL OTHER	3.069	3.161
TOTAL ANNUAL LAB	11.916	11.250
TOTAL INHOUSE	6.522	6.809
TOTAL INHOUSE RDTE	6.441	6.652
ANNUAL OPERATING COST	2.984	3.323

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	69	14	44	25
CIVILIAN	57	11	29	38
TOTAL	136	25	73	63

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE LAB	(THOUSANDS OF ADMIN	SQUARE FEET OTHER	TOTAL	REAL PROP	EQUIP
53	87.668	10.120	67.006	164.794	7.759	10.660

...MISSION

CONDUCTS MEDICAL RSCH INTO MILITARY AVIATION, VEHICLES, & WEAPONS SYS ENVIRONMENT AND THEIR EFFECTS ON CREWMEMBERS' HEALTH & PERFORMANCE. CONDUCTS RSCH ON MEDICAL DEFENSE AGAINST CHEMICAL AGENTS, IMPACT OF CONT OPNS ON CREW PERF, & HEALTH HAZARDS ANAL. OF EMERGING MIL MATL SYS

...CURRENT IMPORTANT PROGRAMS

AVIATOR PERFORMANCE EFFECTS OF CHEMICAL AGENT ANTIDOTE THERAPIES. INDIVIDUAL AND CREW STRESS/WORKLOAD/PERFORMANCE. BIOMEDICAL HAZARDS OF COMBAT AIRCRAFT AND VEHICLES. VISUAL/ACOUSTICAL BIOEFFECTS OF COMBAT MATERIAL AND OPERATIONS. CONTACT LENSES IN MILITARY ENVIRONMENTS

...FUNCTIONS/EQUIPMENT/FACILITIES

SINGLE AND MULTI-AXIS VIBRATION SYSTEMS; HELMET DROP TEST TOWER AND IMPACT FACILITY; VARIABLE CENTER OF GRAVITY HELMET DEVICE; CARDIOPULMONARY LAB; BIOCHEMISTRY LAB; HELICOPTER INSTRUMENTED FLIGHT SIMULATOR; HELICOPTER INFLIGHT MONITORING SYSTEM; MODIFIED AIRCRAFT FOR INFLIGHT MEDICAL RESEARCH; DATA ACQUISITION AND BIOTELEMETRY SYSTEM; IN-HOUSE/MOBILE; ON-BOARD OXYGEN GENERATION SYSTEM; VIVARIUM; HIGH INTENSITY IMPULSE NOISE GENERATOR (SHOCK TUBE); MOBILE ACOUSTICS LAB; ANECHOIC AND REVERBERATION CHAMBERS; BIO-OPTICAL TESTING LAB; OPTICAL FABRICATION LAB; ELECTRO-OPTICAL TESTING LAB; MOBILE VISUAL STUDIES LAB; VISUAL NEUROPHYSIOLOGY LAB; SCIENTIFIC AND MEDICAL RESEARCH INFORMATION CENTER (LIBRARY); ANALOGUE AND DIGITAL COMPUTER SYSTEM; MEDEVAC EQUIPMENT TESTING FACILITY.

INSTALLATION: ARMAMENT RESEARCH, DEVELOPMENT & ENGR CENTER PICATINNY, NJ

CDR: BG J. RAFFIANI JR.

TECH DIRECTOR: VICTOR LINDNER

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	201.800	282.300
TOTAL PROCUREMENT	158.500	95.000
TOTAL O&M	38.000	45.600
TOTAL OTHER	2.500	0.000
TOTAL ANNUAL LAB	400.800	422.900
TOTAL INHOUSE	400.800	422.900
TOTAL INHOUSE RDTE	83.700	113.400
ANNUAL OPERATING COST	58.000	62.500

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	83	0	51	32
CIVILIAN	3827	101	2158	1669
TOTAL	3910	101	2209	1701

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
6487	267.806 1013.046 2747.397 4028.249	139.355 326.700

...MISSION

PROVIDE THE US MILITARY AND ALLIES WITH ARMAMENT SYSTEMS OF MAXIMUM EFFECTIVENESS. CONDUCT RESEARCH AND DEVELOPMENT FOR ASSIGNED MATERIAL. MAINTAIN A STRONG TECH BASE TO TRANSITION ESSENTIAL TECHNOLOGY TO THE DEVELOPMENT & PRODUCTION PROCESS IN SUPPORT OF TRI-SERVICE PERSONNEL.

...CURRENT IMPORTANT PROGRAMS

INSENSITIVE MUNITIONS
SMART MUNITIONS TO DEVELOP HIGH PK FIRE AND FORGET SYSTEMS
ADVANCED TANK CANNON SYSTEM (ATACS)
ADVANCED PROPULSION, ELECTRIC GUNS, LIQUID PROPULSION, SOLID PROPULSION
ADVANCED FIELD ARTILLERY SYSTEM

...FUNCTIONS/EQUIPMENT/FACILITIES

TWENTY-FIVE MILLION ELECTRON-VOLT BETATRON
DYNAMIC GUN CONTROL FACILITY
ELECTRIC GUN CONTROL FACILITY
FULL SCALE CLIMACTIC CONTROL TEST ROOM
HIGH ALTITUDE TEST CHAMBER FACILITY
INTELLIGENT SENSOR BASED ROBOTICS
ONE MILLION VOLT RESOTRON X-RAY SYSTEM
OPTICAL METROLOGY LABRATORY
POWDER GYMNASTICATOR
SCIENTIFIC AND ENGINEERING MAINFRAME COMPUTER CENTER

INSTALLATION: ARMY RESEARCH OFFICE

RSRCH TRIANGLE PRK, NC

DIR: DR. GEORGE A. NEECE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	121.080	120.462
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.096	0.084
TOTAL ANNUAL LAB	121.176	120.546
TOTAL INHOUSE	0.000	0.000
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	4.172	5.678

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	2	0	2	0
CIVILIAN	115	39	40	75
TOTAL	117	39	42	75

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2	0.000	29.420	0.000	29.420	0.000	1.207

...MISSION

UNIVERSITY RESEARCH INITIATIVE WITH 11 CENTERS IN 10 MAJOR THRUST AREAS. DEVELOP THE AMC RESEARCH PROGRAMS FOR MATHEMATICS AND THE PHYSICAL, ENGINEERING, ATMOSPHERIC, TERRESTRIAL AND BIOLOGICAL SCIENCES IAW ARMY REQUIREMENTS. ASSESS, EVALUATE AND PRIORITIZE THE AMC 6.1 PROGRAM; EVALUATE AND ASSESS THE TECH BASE PROGRAMS TO INCLUDE THE IMPACT OF IR&D

...CURRENT IMPORTANT PROGRAMS

RESEARCH IN MATERIAL SCIENCE AND ENGINEERING.
CHEMICAL AND BIOLOGICAL DEFENSE.
ROTARY WING AIRCRAFT RESEARCH.
RESEARCH IN TARGET ACQUISITION.

...FUNCTIONS/EQUIPMENT/FACILITIES

EVALUATION OF RESEARCH PROPOSAL AND RESEARCH PROGRAM PERFORMANCE

INSTALLATION: ATMOSPHERIC SCIENCES LABORATORY

WHITE SNDS MSL RNG, NM

CDR: COL GUNNAR C. CARLSON

TECH DIRECTOR: JAMES E. MORRIS

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	32.252	37.331
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.021	0.051
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	32.273	37.382
TOTAL INHOUSE	19.923	37.382
TOTAL INHOUSE RDTE	19.902	18.652
ANNUAL OPERATING COST	4.560	4.560

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	3	0	4	0
CIVILIAN	390	31	135	255
TOTAL	393	31	139	254

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
15	32.379 81.124 46.989 160.492	2.298 30.688

...MISSION

PROVIDE THE ARMY IN THE FIELD WITH ATMOSPHERIC SYSTEMS AND TACTICAL DECISION AIDS; PROVIDE ATMOSPHERIC EFFECTS FOR THE DESIGN OF ARMY WEAPON SYSTEMS, TACTICS, DOCTRINE AND TRAINING ; AND PROVIDE METEOROLOGICAL SUPPORT TO ARMY RDT&E ACTIVITIES.

...CURRENT IMPORTANT PROGRAMS

HIGH ENERGY LASER SYSTEM TEST FACILITY
PM SMOKE/OBSCURANTS
PM MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)
INTEGRATED METEOROLOGICAL SYSTEM (IMETS)
ELECTRO-OPTICAL SYSTEM ATMOSPHERIC EFFECTS LIBRARY (EOSAEL)

...FUNCTIONS/EQUIPMENT/FACILITIES

THE ATMOSPHERIC SCIENCES LABORATORY (ASL) PROVIDES ESSENTIAL SUPPORT IN TESTS OF ARMY WEAPONS AND MATERIAL, HELPING QUANTIFY ATMOSPHERIC EFFECTS AND DETERMINING CORRECTIVE MODIFICATIONS. ASL CONDUCTS BASIC RESEARCH TO IDENTIFY NEW REMOTE METEOROLOGICAL SENSING TECHNIQUES AND TO MODEL THE BEHAVIOR OF SMOKES, CHEMICALS, AND RADIATIONS IN THE ATMOSPHERE. ASL CONDUCTS EXPLORATORY SOFTWARE DEVELOPMENT TO EVALUATE ATMOSPHERIC EFFECTS ON ARMY SYSTEMS, TACTICS AND FUNCTIONS AND TO PROVIDE TACTICAL DECISION AIDS FOR THE BATTLEFIELD COMMANDER. ASL DEVELOPS TACTICAL METEOROLOGICAL SENSOR SYSTEMS WHICH ARE COST EFFECTIVE AND STATE-OF-THE-ART TO SUPPORT THE BATTLEFIELD COMMANDER. ASL PERFORMS ASSESSMENTS OF ATMOSPHERIC IMPACT UPON THE PROPAGATION AND OPERATION OF DIRECTED ENERGY (LASER) WEAPONS.

INSTALLATION: AVIATION DEVELOPMENT TEST ACTIVITY

FORT RUCKER, AL

CDR: COL TROY E. BURROW

TECH DIRECTOR: JIM MCCRORY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	10.183	10.735
TOTAL PROCUREMENT	3.683	3.250
TOTAL O&M	4.746	6.694
TOTAL OTHER	5.755	5.068
TOTAL ANNUAL LAB	24.367	25.767
TOTAL INHOUSE	18.667	20.724
TOTAL INHOUSE RDTE	10.183	10.735
ANNUAL OPERATING COST	6.579	6.580

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	138	0	26	112
CIVILIAN	95	1	36	59
TOTAL	233	1	62	171

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1196	0.000	47.482	121.733	169.215	1.942	55.103

...MISSION

PLAN, CONDUCT, AND REPORT ON TESTS OF AVIATION SYSTEMS AND AVIATION RELATED SUPPORT EQUIPMENT FOR ARMY, NON ARMY GOVERNMENT AGENCIES AND PRIVATE INDUSTRY

...CURRENT IMPORTANT PROGRAMS

LEAD THE FLEET TESTING
FOREIGN MATERIEL TESTING
GRISLY HUNTER
AUTOMATIC TARGET HANDOFF SYSTEM
AH-64/UH-60 VULNERABILITY ASSESSMENT

...FUNCTIONS/EQUIPMENT/FACILITIES

TWENTY-SEVEN FIXED AND ROTARY WING AIRCRAFT ARE ASSIGNED (1 T-42, 1 U-21, 3 AH-64, 4 AH-1S, 1 AH-1F, 1 UH-60, 1 UH-60A, 2 CH-47, 3 EH-60, 1 OH-58, 1 OH-58C, 8 UH-1H) WHICH MAY BE USED AS TEST BEDS FOR ALL COMPONENTS, EQUIPMENT OR SUPPLIES APPLICABLE TO THAT A/C SERIES. A MODULAR ENGINE TEST SYS PROVIDES ACCURATE MEASUREMENTS OF TURBINE ENG PERFORMANCE FOR ENGINES UP TO 5000 RHP & WT UP TO 2000 LB. ON-SITE DATA PROCESSING & DISPLAY CAP EXISTS WITH REAL TIME PROCESSING, HP3000 ADACS DATA BASE, AN IBM 4361 COMPUTER SYS & A NETWORK OF PC'S. TECH PHOTOGRAPHIC CAP IS AVAIL TO INCL VIDEO & 16MM INSTRUMENTATION CAMERAS. THE INSTRUMENTATION LAB CAN COLLECT ANALOG & DIGITAL MEASUREMENTS USING 14 TRACK INSTRUMENTATION RECORDERS & DIGITAL CASSETTE RECORDERS. HAS B&W COLOR VIDEO RECORDING CAP, STRIP-CHART & OSCILLOGRAPH RECORDING CAP.

INSTALLATION: AVIATION ENGINEERING FLIGHT ACTIVITY

EDWARDS AFB, CA

CDR: COL JOHN HAGEN

TECH DIRECTOR: MR. JAMES HAYDEN

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	11.847	9.729
TOTAL PROCUREMENT	0.583	0.638
TOTAL O&M	0.120	0.275
TOTAL OTHER	2.062	2.059
TOTAL ANNUAL LAB	14.612	12.701
TOTAL INHOUSE	10.948	9.347
TOTAL INHOUSE RDTE	10.365	8.709
ANNUAL OPERATING COST	3.503	3.484

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	57	0	22	35
CIVILIAN	109	0	25	84
TOTAL	166	0	47	119

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
49	9.200	1.600	124.000	134.800	4.315		40.195

...MISSION

CONDUCT AIRWORTHINESS TESTING OF ALL ARMY AIR VEHICLES SUPPORT, READINESS THROUGH FLIGHT TESTING IN RESPONSE TO FIELD IDENTIFIED AIRWORTHINESS PROBLEMS, SUSTAIN AND CONTINUE DEVELOPMENT OF HIGHLY INSTRUMENTED FLEET OF ARMY AIRCRAFT CONDUCT PRENAVAL TEST PILOT ORIENTATION PROGRAM

...CURRENT IMPORTANT PROGRAMS

ENGINEERING FLIGHT TESTS ON AH-1 WHILE FIRING MK-66 HYDRA ROCKETS
UH-1H COMPOSITE MAIN ROTARY BLADES VIBRATION ASSESSMENT
LIGHT HELICOPTER DEMVAL ENGINEER AND TEST PILOT SUPPORT TO SSB
PRELIMINARY AIRWORTHINESS EVALUATION OF AH-64 APACHE WITH T701C ENGINES
AIRWORTHINESS AND FLIGHT CHARACTERISTICS OF OH-58D HELICOPTER

...FUNCTIONS/EQUIPMENT/FACILITIES

INSTRUMENTATION LAB CAPABLE OF DESIGN FABRICATION INSTALLATION AND OPERATION OF STATE-OF-THE-ART HIGHLY CALIBRATED PACKAGES TO MEASURE AND RECORD ALL AIRCRAFT SYSTEM AND SUBSYSTEMS AS WELL AS ATMOSPHERIC CONDITIONS. AIRCRAFT MAINTENANCE AND ALL RELATED SHOPS CAPABLE OF SUPPORTING BOTH PRODUCTION FOREIGN AND ONE OF A KIND EXPERIMENTAL AIRCRAFT. DATA REDUCTION AND ANALYSIS CAPABILITY BUILT AROUND A SERIES OF VAX MICRO-COMPUTERS TO SUPPORT ENGINEERING EFFORTS. MAINTAIN A HIGHLY MODIFIED CH47 WITH ICING SPRAY SYSTEM AND JU-21 WITH AN ATMOSPHERIC AIRBORNE DATA ANALYSIS CAPABILITY FOR THE CONDUCT OF BOTH NATURAL AND ARTIFICIAL ICING FIGHT TESTING OF ENTIRE AIRCRAFT. FACILITIES AT LOW, MEDIUM AND HIGH ALTITUDES TO SUPPORT FLIGHT TESTS. MAINTAIN FULL PHOTOGRAPHIC VIDEO AND GRAPHIC ARTS CAPABILITY TO SUPPORT REPORT PREPARATION AND PUBLICATION.

INSTALLATION: AVIATION RESEARCH & TECH ACTIVITY (AVSCOM)

MOFFETT FIELD, CA

DIR: DR. RICHARD M. CARLSON

DEPUTY DIR:

COL JEFFREY H. GODFREY

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	97.026	61.970
TOTAL PROCUREMENT	0.596	0.500
TOTAL O&M	1.845	1.347
TOTAL OTHER	1.208	1.222
TOTAL ANNUAL LAB	100.675	65.039
TOTAL INHOUSE	42.850	41.009
TOTAL INHOUSE RDTE	41.238	39.802
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	15	1	15	0
CIVILIAN	378	31	273	105
TOTAL	393	32	288	105

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
127	88.848 58.673 16.370 163.891	2.350 17.106

...MISSION

PLAN, DEVELOP, MANAGE, & EXECUTE RESEARCH & DEVELOPMENT PROGRAMS FOR ARMY AVIATION SYSTEMS. PROVIDE TECH SUPPORT TO PROJECT/PRODUCT MANAGERS AND SYSTEMS DEVELOPERS AS REQUIRED. PROVIDE INDEPENDENT TECHNICAL RISK ASSESSMENT TO COMMANDER USA AVSCOM AND HIGHER AUTHORITY.

...CURRENT IMPORTANT PROGRAMS

RSCH IN FUNDAMENTAL ROTOR/ROTORCRAFT AERODYNAMICS, DYNAMICS, AND NOISE. R&D OF ENGINES, SMALL GAS TURBINES, TRANSMISSIONS, AND BEARINGS. R&D TO IMPROVE RELIABILITY & MAINTAINABILITY OF AIRMOBILE SYSTEMS. RSCH COMPOSITES & EVALUATE APPLICATIONS TO IMPROVE STRUCTURES FOR A/C. EVOLVE TECHNOLOGY & CRITERIA TO IMPROVE FLIGHT SAFETY & SURVIVABILITY.

...FUNCTIONS/EQUIPMENT/FACILITIES

THREE DIRECTORATES - AT MOFFETT FIELD CA, CLEVELAND OH, HAMPTON VA; CO-LOCATED WITH NASA; PARTICIPATING IN AERONAUTICAL RESEARCH AND DISCIPLINES JOINTLY USING WIND TUNNELS, SIMULATORS, AND LABORATORY TEST FACILITIES, INCLUDING SHOPS, FLIGHT LINE AND HANGER, ENGINE AND TRANSMISSION TEST FACILITIES, AND COMPUTATIONAL EQUIPMENT. FOURTH DIRECTORATE AT FORT EUSTIS, VA, PERFORMING ADVANCED APPLICATIONS WORK INCLUDING AIRCRAFT WEAPONIZATION AND MISSION SUPPORT EQUIPMENT. MAJOR EQUIPMENT AND FACILITIES ARE FILAMENT WINDING MACHINES, TENSILE TESTERS, VIBRATION TESTER, SMALL BALLISTIC RANGE, CALIBRATION LAB, ENVIRONMENT CHAMBER, ATOMIC ABSORPTION SPECTROMETER, TELEMETER GROUND STATION, NON-DESTRUCT TESTING FACILITY, AND FLIGHT SAFETY LAB.

INSTALLATION: AVIONICS R&D ACTIVITY

FT. MONMOUTH, NJ

DIR: DAVID V. GAGGIN

DEP DIRECTOR: A. CHARLES MAROTTA

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	14.508	16.615
TOTAL PROCUREMENT	3.077	3.449
TOTAL O&M	2.055	2.602
TOTAL OTHER	0.461	0.523
TOTAL ANNUAL LAB	20.101	23.189
TOTAL INHOUSE	8.774	13.053
TOTAL INHOUSE RDTE	6.818	10.634
ANNUAL OPERATING COST	3.892	3.921

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	11	0	11	0
CIVILIAN	210	5	154	56
TOTAL	221	5	165	56

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
2	52.450	13.665	19.100	85.215		0.000	13.400

...MISSION

RESPONSIBLE FOR THAT PORTION OF AVSCOM'S MISSION WHICH PERTAINS TO AVIONICS FROM RESEARCH THRU FIRST-TIME PRODUCTION. THIS ENCOMPASSES: SYSTEMS ARCHITECTURE; AVIONICS HARDWARE (i.e., COMMUNICATION NAVIGATION, COCKPIT INSTRUMENTATION, AIRBORNE COMMAND & CONTROL); AND SYSTEMS ENGINEERING INTEGRATION.

...CURRENT IMPORTANT PROGRAMS

DIGITAL AVIONICS TECHNOLOGY
INTEGRATED COMMUNICATIONS, NAVIGATION, IDENTIFICATION, AVIONICS
AVIATION BATTLE MANAGEMENT CONCEPT
COMMAND AND CONTROL GROUND STATION
VOICE-CONTROLLED COCKPIT SYSTEMS

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR EQUIPMENT INCLUDES DIGITAL HOT BENCH, AUTOMATED DATA COLLECTION AND REDUCTION EQUIPMENT, AND AUDIO/DIGITAL ANALYZERS
FACILITIES INCLUDE TACTICAL AVIONICS SYSTEMS SIMULATOR (TASS), SYSTEM TEST BED FOR AVIONICS RESEARCH (STAR), AUDIO ACOUSTIC FACILITY, ADJACENT HELIPORT, AVIONICS INTEGRATION RESEARCH LABORATORY, NAVIGATION VAN, ANTENNA RESEARCH FACILITY, AND COCKPIT EVALUATION FACILITY.

INSTALLATION: BALLISTIC RESEARCH LABORATORY

ABERDEEN PRG GRD, MD

DIR: JOHN T. FRASIER

DEP DIRECTOR: LTC CHARLES K. GAILEY, III

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	40.251	16.889
TOTAL PROCUREMENT	17.222	1.746
TOTAL O&M	1.022	1.709
TOTAL OTHER	9.895	15.096
TOTAL ANNUAL LAB	68.390	35.440
TOTAL INHOUSE	45.911	26.585
TOTAL INHOUSE RDTE	21.143	8.901
ANNUAL OPERATING COST	12.059	15.700

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	19	1	8	11
CIVILIAN	755	113	429	326
TOTAL	774	114	437	337

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
1958	378.000	123.000	151.000	652.000	0.000	107.072

...MISSION

ARMY LEAD LAB FOR BALLISTIC TECHNOLOGY, VULN, VULN REDUCTION, CHARGED PARTICLE BEAM TECH AND LIQUID PROPULSION TECH (GUNS). MAINTAIN WEAPONS ORIENTED FUND. RSCH PROG RELATED TO ARMY NEEDS. CONDUCT EXPLORATORY DEV EFFORTS TO SOLVE MILITARY PROBLEMS AND EVAL SOLUTION FEASIBILITY.

...CURRENT IMPORTANT PROGRAMS

ANTI-ARMOR WARHEADS AND KINETIC ENERGY PENETRATORS.
BALLISTIC PROTECTION TECHNOLOGY FOR US MATERIEL.
LIQUID PROPULSION TECHNOLOGY (GUNS).
VULNERABILITY ANALYSIS. VULNERABILITY REDUCTION US. THREAT MATERIEL.
MUNITION SURVIVABILITY ANALYSIS AND ENHANCEMENT.

...FUNCTIONS/EQUIPMENT/FACILITIES

LASER DIAGNOSTIC FACILITY FOR PROPELLANT FLAME ANAL; COMPUTED TOMOGRAPHY FOR BALLISTIC EVENTS; PROPELLANT FRACTURE MECHANICS ANALYSIS FACILITY; INSTRUMENTED INDOOR AERODYNAMIC FLIGHT RANGES FOR PROJECTILES UP TO 8"; THREE DEGREE-OF-FREEDOM FLIGHT SIMULATOR FOR SHELLS UP TO 155MM
EXPLOSIVE MECHANICS TEST FACILITY, HIGH EXPLOSIVE CASTING AND PRESSING FACILITY; HIGH ALTITUDE BLAST SPHERE; THERMAL BLAST SHOCK TUBE TO SIMULATE NUCLEAR EFFECTS; ADVANCED TERMINAL BALLISTIC TEST FACILITY FOR ARMOR AND ANTI-ARMOR RESEARCH; ANECHOIC CHAMBER FOR MM WAVE SENSOR AND SCALE MODEL SIGNATURE RESEARCH; ION BEAM ACCELERATOR; FIELD TEST FAC FOR WARHEAD, PENETRATOR, EXPLOSIVE AND ARMOR RSCH; HIGH SPEED AND SPARK PHOTOGRAPHY; X-RAY CINERADIOGRAPHY; COMPUTER AIDED DESGN ENG.; AND CENTRAL SITE AND MINI COMPUTERS WITH 900 REMOTE INTERACTIVE TERMINALS.

INSTALLATION: BELVOIR RD&E CENTER

FT. BELVOIR, VA

CDR: COL PETER J. CAHILL

TECH DIRECTOR: M. ZUSSMAN

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	126.047	107.473
TOTAL PROCUREMENT	40.300	0.000
TOTAL O&M	24.700	33.066
TOTAL OTHER	10.000	0.000
TOTAL ANNUAL LAB	201.047	140.539
TOTAL INHOUSE	65.991	54.970
TOTAL INHOUSE RDTE	40.409	31.791
ANNUAL OPERATING COST	25.400	23.693

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	51	0	10	41
CIVILIAN	879	25	429	450
TOTAL	930	25	439	491

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
1052	433.533 270.281 84.902 788.716	20.238 37.451

...MISSION

THE BELVOIR RDT&E CENTER'S THRUST IS CONCENTRATED ON ENHANCED BATTLE-FIELD MOBILITY AND SURVIVABILITY THROUGH MORE PRODUCTIVE & MODERNIZED LOGISTIC EQPMT. OVER 18 COMPLEX & DIVERSE FIELDS OF ENDEAVOR, AN INTEGRATED ACQUISITION STRATEGY THAT INCLUDES COMM'L & FULL MIL DESIGN IS EMPLOYED.

...CURRENT IMPORTANT PROGRAMS

PHYSICAL SECURITY/FUELS HANDLING EQUIPMENT
TACTICAL LOGISTICS EQUIPMENT
COUNTERMINE/COUNTEROBSTACLE EQUIPMENT
TACTICAL ELECTRIC POWER SYSTEMS
BRIDGING SYSTEMS

...FUNCTIONS/EQUIPMENT/FACILITIES

MINEFIELD RECON & DETECTION SYSTEM (MIRADOR) COMPLETED TESTBED TRIALS. THE FIRST OF 4 NEW LOGISTIC SUPPORT VESSELS (LSV) WAS COMMISSIONED. THE FIRST ARMY SHIP IN 30 YEARS, IT WILL BE USED TO DISCHARGE/BACKLOAD SHIPS /DELIVER CARGO TO TERMINAL AREAS INACCESSIBLE TO DEEP DRAFT VESSELS. A SELF-DEPLOYABLE ROUGH TERRAIN FORKLIFT IS BEING DEV TO OPERATE AT SPEEDS UP TO 45 MPH TO FACILITATE AMMUNITION HANDLING & RESUPPLY. A BOXCAR WAS DEV TO TRANSPORT NAVY'S TRIDENT II MISSILE.TWO INTN'L PROGRAMS WERE INITIATED TO ASSESS CAPABILITIES OF THE GERMAN FOLDING BRIDGE (FFB) 2000 & THE LEGUAN BRIDGE TO MEET ARMY RIVER/GAP CROSSING NEEDS.PROTOTYPE DESIGN FOR THE NEW FAMILY OF QUIET GENERATORS WAS COMPLETED.INTENDED FOR COMMER CIAL DEV & PRODUCTION. GENERATORS WILL BE SMALLER, LIGHTER & QUIETER WITH IMPROVED RELIABILITY & LOWER O&S COSTS.

INSTALLATION: BIOMEDICAL RESEARCH & DEVELOPMENT LAB

FT. DETRICK, MD

CDR: COL STEPHEN C. HEMBREE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	10.447	10.135
TOTAL PROCUREMENT	0.000	0.018
TOTAL O&M	0.073	0.080
TOTAL OTHER	1.646	1.739
TOTAL ANNUAL LAB	12.166	11.972
TOTAL INHOUSE	5.783	5.607
TOTAL INHOUSE RDTE	5.693	5.468
ANNUAL OPERATING COST	1.873	1.401

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	4	20	9
CIVILIAN	88	15	43	45
TOTAL	117	19	63	54

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
5	55.533	38.838	10.466	104.837	10.104	5.899

...MISSION

CONDUCTS R&D IN FIELD MEDICAL MATERIEL, VECTOR CONTROL SYSTEMS, HEALTH HAZARDS, & ENVIRONMENTAL HEALTH EFFECTS. DEVELOPS, TESTS, & EVALUATES FIELD MEDICAL, DENTAL, WATER TREATMENT, & VECTOR CONTROL EQUIPMENT, METHODS, & MATERIALS. ESTABLISH HEALTH HAZARD DATA BASES.

...CURRENT IMPORTANT PROGRAMS

RESEARCH PROJECTS INCLUDE DEVELOPMENT AND TESTING OF VITAL SIGNS MONITOR, CHEMICAL WARFARE AGENT PROTECTIVE PATIENT WRAP, ARMY COLLAPSIBLE INSECT SURVEILLANCE (ACIS) TRAP, PESTICIDE DISPERSAL UNIT (PDU), INTERIM WATER QUALITY CRITERIA FOR MILITARY RELEVANT COMPOUNDS, AND ARMORED VEHICLE CREWMAN OCCUPATIONAL EXPOSURE AND PERFORMANCE DECREMENTS.

...FUNCTIONS/EQUIPMENT/FACILITIES

DESIGN, DEVELOP, TEST, & FABRICATE PROTOTYPES, TEST MODELS, & LIMITED QUANTITIES OF FIELD MEDICAL, DENTAL, & VECTOR CONTROL EQUIPMENT, SYSTEMS, AND MATERIALS. PERFORM HEALTH HAZARD ASSESSMENT ON MILITARY UNIQUE POLLUTANTS. ESTABLISH HEALTH DATA BASES FOR OCCUPATIONAL AND FIELD EXPOSURES TO CHEMICALS AND MICROORGANISMS.

INSTALLATION: CENTER FOR CMD, CONTROL, AND COMMUNICATIONS FT. MONMOUTH, NJ

CDR: MG BILLY M. THOMAS

DIRECTOR:

MR. E. FAMOLARI, JR

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	45.062	25.379
TOTAL PROCUREMENT	17.184	16.258
TOTAL O&M	7.296	9.775
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	69.542	51.412
TOTAL INHOUSE	23.345	24.256
TOTAL INHOUSE RDTE	13.300	14.688
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	14	0	5	9
CIVILIAN	302	14	248	54
TOTAL	316	14	253	63

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
0	58.000	50.000	4.000	112.000	0.000		14.977

...MISSION

CTR FOR C3 SYSTEMS MISSION IS TO PERFORM RSCH DEVL AND ENGR ACTIVITIES TO ADVANCE AND APPLY STATE-OF-THE-ART IN C3 SYSTEMS AND CAPABILITIES, TO PROVIDE TECHNICAL SUPPORT TO PM'S AND OTHER CUSTOMERS, AND TO SUPPORT THE TROOP USERS IN THE FIELD.

...CURRENT IMPORTANT PROGRAMS

TACT SYS IMPLEMENT DISTRIB COMM AND PROCESSING PROVIDING C3 MULTIPLIERS INTELLIGENT AUTOMATED DECISIONS FOR BATTLEFIELD COMMANDERS
FIBER OPTIC COMM SYS; FIBER OPTIC CABLE SYS FOR DISPERSED CMD POSTS
HF MODEM; VHF FREQ HOPPING MULTIPLEXER AND SINGARS PACKET APPLIQUE
ARMY SECURE TACTICAL OPERATING SYS; SECURE DISTRIBUTED AUTOMATED DB

...FUNCTIONS/EQUIPMENT/FACILITIES

NET RADIO LAB-DEVOTED TO RDTE OF HF AND VHF RADIOS, MODEMS, AND ANCILLARY DEVICES. ACOUSTICS LAB-EQPD WITH ANECHOIC AND REVERBERANT CHAMBERS AND ASSOCIATED AUTOMATED AUDIO TEST AND MEASUREMENT EQPTS. ELECTROMAGNETIC (EMI) LAB-USED TO ASCERTAIN EMI CHARACTERISTICS OF TACTICAL MILITARY SYS DEVELOPMENT. ARTIFICIAL INTEL LABS-TO INVESTIGATE AND DEVELOP TECHNIQUES OF AI TO IMPROVE C2. COMM SYSTEMS DESIGN CTR-PROVIDES ENGR SUPPORT FOR DEVELOPING AND FIELDING COMM SYS. FIBER OPTICS LAB-DEVELOP, TEST, AND EVALUATE NEW FIBER OPTIC COMPONENTS AND SYSTEMS IN SOLVING ROC AND O&O REQUIREMENTS. C3 SYSTEMS SIMULATION FACILITY-COMPUTER FACIL TO PERFORM SIMULATION OF ARMY COMM SYSTEMS, BOTH CURRENT AND PROPOSED. RAPID CONFIGURATION LAB-PROVIDES RAPID PERFORMANCE CHECKOUT FOR PM'S OF ALTERNATIVE SYSTEMS AND SUB-CONFIGURATIONS.

INSTALLATION: CENTER FOR ELECTRONIC WARFARE/RSTA

FT. MONMOUTH, NJ

CDR: MG BILLY THOMAS

DIRECTOR:

MR. VITO J. DEMONTE

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	69.296	48.723
TOTAL PROCUREMENT	178.532	126.989
TOTAL O&M	17.950	5.749
TOTAL OTHER	0.000	2.124
TOTAL ANNUAL LAB	265.778	183.585
TOTAL INHOUSE	24.834	26.181
TOTAL INHOUSE RDTE	12.059	13.841
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	38	0	1	37
CIVILIAN	267	8	159	108
TOTAL	305	8	160	145

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
225	70.744	90.037	0.000	160.781	6.775		9.469

...MISSION

PROVIDE THE ARMY WITH ENHANCED CAPABILITIES FOR SURVEILLANCE, TARGET ACQUISITION, IDENTIFICATION, EMITTER LOCATION AND IDENTIFICATION OF COMBAT VEHICLES AND MATERIEL, SELF-PROTECTION, RADIATION DETECTION AND CLASSIFICATION AND WEATHER DATA.

...CURRENT IMPORTANT PROGRAMS

MEDFLI
APACHE ESCORT JAMMER
WARLOCK
GUARDRAIL
STINGRAY

...FUNCTIONS/EQUIPMENT/FACILITIES

VAX 11/730 FOR THREAT DEPLOYMENT SIMULATION AND FOR AN AI COMPUTING FACILITY. SPECIALIZED R&D FACILITY FOR LAUNCHING AND TRACKING METEOROLOGICAL BALLOONS. LASER/EO TEST RANGE LOCATED IN WAYSIDE IS USED FOR LASER AND EO FIELD TESTS. RADAR MEASUREMENT FACILITY IS USED TO RECORD NONCOMMUNICATIONS PULSE ENVIRONMENT. ANTENNA FACILITY CONSISTS OF AN ANECHOIC CHAMBER, AN OUTDOOR MEASUREMENT, ASSOCIATED INSTRUMENTATION. DGTS IS A SOFTWARE BASED SYSTEM FOR DEVELOPING AND GENERATING BATTLEFIELD SCENARIOS TO SUPPORT DEVELOPMENT AND TESTING OF EW/RSTA SYSTEMS. A NEW GAMMA RADIATION SOURCE ENHANCES THE RADIATION EXPOSURE CAPABILITY FOR RADIAC DOSE-RATE & DOSE SENSOR DEVEL & CALIBRATION. DATA ANAL. & ALGORITHM DEVEL. FACILITY. MULTI-SENSOR INTEGRATION COMP FAC. ANAL OF SIGNALS FOR EARLY RECOGNITION COMP FAC.

INSTALLATION: CENTER FOR NIGHT VISION/ELECTRO-OPTICS

FT. BELVOIR, VA

DIR: DR. RUDOLF G. BUSER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	96.559	104.034
TOTAL PROCUREMENT	15.748	11.143
TOTAL O&M	2.749	2.675
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	115.056	117.852
TOTAL INHOUSE	33.067	38.971
TOTAL INHOUSE RDTE	28.164	32.940
ANNUAL OPERATING COST	14.693	11.478

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	1	6	23
CIVILIAN	454	36	284	170
TOTAL	483	37	290	193

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	30.000	44.473	37.000	111.473	12.244	54.350

...MISSION

PROVIDE TECHNOLOGY AND EQUIPMENT TO PERMIT TARGET ACQUISITION AT NIGHT AS EFFECTIVE IN DAY, THROUGH SMOKE AND ADVERSE WEATHER WHILE AT THE SAME TIME REDUCING THE TASK LOADING OF THE OPERATOR.

...CURRENT IMPORTANT PROGRAMS

2ND GENERATION HIGH PERFORMANCE IR SENSORS & FOCAL PLANE ARRAYS
AIDED TARGET RECOGNITION
COUNTERMEASURES LASERS/COUNTER-COUNTERMEASURES DEVICES AND TECHNOLOGY
SENSOR PERFORMANCE MODELING/ANALYSIS AND FIELD EVALUATIONS
PROTOTYPE DEVELOPMENT OF NIGHT VISION AND ELECTRO-OPTIC DEMONSTRATORS

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR EQUIPMENT AND FACILITIES CAPABILITIES INCLUDE: SMALL ARMS FIRING RANGE, AP HILL DROP RANGE, ALGORITHM ENHANCEMENT COMPUTER FACILITY, OPTICS TEST AND EVALUATION FACILITY, INFRARED MATERIAL CLEAN ROOM, ADVANCED SENSOR/ATR PROCESSOR TEST FACILITY/DIGITAL TERRAIN BOARD, MOLECULAR BEAM EPITAXIAL FACILITY, DAVISON AIRFIELD TEST FACILITY, DETECTOR/DEWAR TEST FACILITY, COMMON MODULE ELECTRONICS TEST FACILITY.

INSTALLATION: CENTER FOR SIGNALS WARFARE

WARRENTON, VIRGINIA

CDR: MG BILLY THOMAS

TECH DIRECTOR: MR. HERBERT S. HOVEY, JR

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	48.853	46.099
TOTAL PROCUREMENT	64.694	90.952
TOTAL O&M	9.159	7.654
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	122.706	144.705
TOTAL INHOUSE	7.011	5.849
TOTAL INHOUSE RDTE	5.518	4.169
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	38	0	2	36
CIVILIAN	208	3	96	112
TOTAL	246	3	98	148

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	13.492	50.794	3.000	67.286	26.699	11.900

...MISSION

PROVIDE EFFECTIVE SIGNALS INTELLIGENCE/EW (IEW) MATERIEL CAPABILITY TO U.S. ARMY THROUGH: (1) TECH DEVEL AND PROTOTYPE DEMOS (2) DEVELOPMENT, PRODUCTION AND FIELDING OF EQUIPMENT AND SYSTEMS FOR STRATEGIC NEEDS (3) SUPPORT TO PM-SW, PEO-IEW, PM-JTF AND OTHERS IN THE DEVELOPMENT AND PRODUCTION OF TACTICAL IEW SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

TROJAN
TRAILBLAZER
ARTIFICIAL INTELLIGENCE (AI) FUSION RESEARCH
COMMUNICATIONS ELECTRONIC COUNTERMEASURES (ECM)
STRATEGIC SYSTEMS

...FUNCTIONS/EQUIPMENT/FACILITIES

THE SIGNALS ANALYSIS LAB IS COMPOSED OF STATE-OF-THE-ART ELECTRONIC EQUIP. (SOME ARE ONE OF A KIND). SIGNALS PROCESSING LAB CONDUCTS R&D OF NON-COOP SIGNAL PROCESSING, WITHIN THIS LAB ARE DIRECTION FINDING AND MODEM TESTS BEDS FOR DEVEL OF SIGNAL PROCESSES. THE LAB IS SURROUNDED BY A 6-SQUARE MILE, CO-LOCATED ANTENNA FIELD WITH CONTROL ACCESS. THE COMM. ELEC. COUNTERMEASURES (ECM) LAB CONDUCTS EXPERIMENTS & INVEST. IN COMMUNICATIONS ECM EFFECTIVENESS & DEFINES NEW ECM TECHNIQUES. THE TACTICAL INTELLIGENCE DATA FUSION TEST BLD DEVELOPS & DEMOS CRITICAL TECH REQUIRED TO AUTOMATE THE TAC. INTELL. DATA FUSION PROCESS; ACCEPTS, EVALUATES & INTEGRATES ADVANCED FUSION TECH INTO ALL SOURCE ANALYSIS (ASAS). R&D FACILITY LOCATED OVERSEAS; FULLY MANNED BY PERM. TECH. & OP. PERS.

INSTALLATION: CHEMICAL RESEARCH DEVELOPMENT AND ENGR CTR ABERDEEN PVG GRD, MD

CDR: BG PETER D. HIDALGO

TECH DIRECTOR: JOSEPH J. VERVIER

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	117.598	83.964
TOTAL PROCUREMENT	65.121	14.500
TOTAL O&M	12.937	9.200
TOTAL OTHER	2.500	2.500
TOTAL ANNUAL LAB	198.156	110.164
TOTAL INHOUSE	97.270	75.500
TOTAL INHOUSE RDTE	76.292	56.500
ANNUAL OPERATING COST	16.000	16.500

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	89	2	42	47
CIVILIAN	1048	70	630	418
TOTAL	1137	72	672	465

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
3471	734.690 291.063 330.141 1355.894	25.027 79.697

...MISSION

A RSCH, DEV AND ENGR CTR PROVIDING US FORCES WITH CAPABILITY TO OPERATE ON A CML/BIOL BATTLEFIELD AND DETER CML ATTACK. PROVIDE LIFE CYCLE ENGR FOR CML WEAPONS AND CML BIOL DEFENSE. ACT AS DOD LEAD LAB FOR CML DEF/ DETERRENCE. CONDUCT SMOKE/OBSCURANT TECH BASE. COORDINATE ITL PROGRAMS.

...CURRENT IMPORTANT PROGRAMS

CB RECONNAISSANCE, DETECTION AND IDENTIFICATION
INDIVIDUAL/COLLECTIVE PROTECTION
CB DECONTAMINATION AND CONTAMINATION AVOIDANCE
SMOKE OBSCURANT SYSTEMS
CHEMICAL RETALIATORY MUNITIONS ANTIMATERIEL SYSTEMS

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR EQUIPMENT IS CONTAINED IN A COMPLEX OF ENGR/LAB AREAS. INCLUDES CHEMICAL PILOT PLANTS, AEROSOL CHAMBER, SMOKE MUNITION FILLING FACILITY, PRODUCTION AND FACILITY DESIGN, CHAMBER FOR STUDIES OF RESPIRATORY PROTECTION DESIGN DRIVERS, SIMULANT AGENT CHALLENGE TEST CHAMBER, RUBBER/ELASTOMER MOLD FACILITY, SPECIALIZED CHEMICAL AGENT LABS, PYROTECHNIC MIXING, LOADING, HANDLING FACILITY, SUBSONIC-SUPERSONIC, TRANSONIC WIND TUNNEL, COMPLETE ANALYTICAL CHEMISTRY CAPABILITY (TRACE ANALYSIS), OBSCURANT TEST CHAMBERS FOR TRANSMISSION MEASUREMENTS (UV THRU MICROWAVE), LASER SPECTROSCOPY LABORATORY.

INSTALLATION: COLD REGIONS RESEARCH & ENGINEERING LAB

HANOVER, NH

CDR: COL C. S. NICHOLS

TECH DIRECTOR: DR. L. E. LINK

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	13.488	16.250
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.610	1.250
TOTAL OTHER	7.120	5.982
TOTAL ANNUAL LAB	22.218	23.482
TOTAL INHOUSE	18.995	19.809
TOTAL INHOUSE RDTE	11.195	13.487
ANNUAL OPERATING COST	5.359	5.376

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	11	0	6	5
CIVILIAN	304	39	124	180
TOTAL	315	39	130	185

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
31	107.797	68.697	126.506	303.000	16.743	15.940

...MISSION

AS THE ARMY'S COMPREHENSIVE EXPERT ON COLD REGIONS PROBLEMS THE COLDREGIONS RSCH & ENG LABORATORY INVESTIGATES BOTH THE NATURE AND EFFECTS OF COLD & WINTER ON MILITARY ACTIVITIES WHERE WINTER & COLD REPRESENT A SEVERE PROBLEM. MANAGE ARMY COLD REGIONS INFORMATION CENTER.

...CURRENT IMPORTANT PROGRAMS

COMBAT OPERATIONS: EFFECTS OF WINTER ENVIRONMENT ON ARMY OPERATIONS
IMPACT OF WINTER ENVIRONMENT ON NEW WEAPON SYSTEMS AND OTHER MATERIEL
EFFECTS OF COLD ON CONSTRUCTION, OPERATION & MAINT. MILITARY FACILITIES.
IMPROVE WINTER NAVIGATION
DEVELOP ENVIRONMENTAL REMOTE SENSING APPLICATIONS

...FUNCTIONS/EQUIPMENT/FACILITIES

THE MAIN LABORATORY AT USACRREL CONTAINS 24 COLD LABS WHICH CAN BE OPERATED TO -50F, AN ICE ENGINEERING LAB FOR LARGE SCALE ICE MODELING EXPERIMENTS, AN ELECTRON MICROSCOPE LAB, A SOILS PROC. LAB, A WASTEWATER TREATMENT RSCH FAC. A FROST EFFECTS LAB WHERE 6 TO 8 FREEZE/THAW CYCLES CAN BE CONDUCTED IN ONE YEAR, TRACE CHEMICALS ANALYSIS LABS INCLUDING A CLEAN ROOM COMPLEX, A SMALL LASER FAC. AND A MATERIALS TESTING FAC. AN IMPACT TEST FAC. CAPABLE OF SIMULATING THE SPACE ENVIRONMENT, AND A SNOW DRIFT MODELING WIND TUNNEL. THE CRREL-ALASKA OFFICE AT FAIRBANKS PROVIDES RESEARCH LOGISTICS SUPPORT AND MAINTAINS COORDINATION WITH ALASKA AGENCIES MILITARY AND CIVILIAN PERSONNEL HAVE EXPERTISE OVER A WIDE RANGE OF SCIENTIFIC AND ENGINEERING DISCIPLINES RELATED TO COLD REGIONS RESEARCH.

INSTALLATION: COLD REGIONS TEST CENTER

APO SEATTLE,WA(ALASKA)

CDR: COL WAYNE A. HANSON

TECH DIRECTOR: WILLIAM J. HASLEM

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	7.768	5.724
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	8.237	8.993
TOTAL ANNUAL LAB	16.005	14.717
TOTAL INHOUSE	7.768	5.724
TOTAL INHOUSE RDTE	7.768	5.724
ANNUAL OPERATING COST	5.104	3.342

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	99	0	36	63
CIVILIAN	32	0	13	19
TOTAL	131	0	49	82

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
125475	0.000	35.010	100.005	135.015	11.125	13.960	

...MISSION

PLAN, CONDUCT, AND REPORT THE RESULTS OF COLD REGIONS, MOUNTAIN AND NORTHERN ENVIRONMENTAL PHASES OF DEVELOPMENT AND OTHER TEST. REVIEW PLANS AND MONITOR DEVELOPMENT TESTING IAW INTEGRATED TESTING CYCLE POLICIES. PROVIDE ADVICE & GUIDANCE TO GOVT AGENCIES & PRIVATE INDUSTRY.

...CURRENT IMPORTANT PROGRAMS

COLD REGION SPECIAL STUDY TEST OF SQUAD AUTO WEAPON (SAW)
SPECIAL STUDY OF SMALL UNIT SPT VEHICLE (SUSV) W\5-250 SHELTER
SNOW AND ICE TERRAIN EQUIPMENT
TACTICAL EXPLOSIVE SYSTEM (TEXS)
HOSPITAL WARD FOOD TRANSPORT SYSTEM (HWFTS)

...FUNCTIONS/EQUIPMENT/FACILITIES

FACILITY CAN ACCOMMODATE A WIDE VARIETY & LARGE NUMBER TEST AT ANY ONE TIME. SEVERAL VEH TEST COURSES & EXTENSIVE CROSS COUNTRY TERRAIN RANGES ARE AVAILABLE. 500,000 ACRE ISOLATED IMPACT AREA, 50KM MAX UNOBSERVED RANGE, LARGE RESTRICTED AIR SPACE WITH UNRESTRICTED FIRING TO 10,000FT ORDINATE. COORD WITH FAA CAN EFFECT UNRESTRICTED ORDINATE. 3RD ORDER SURVEY POINTS. GOOD SECONDARY ROADS. PHONE NON/TAC RADIO AT ALL RANGES AND TEST SITES. AUTODIN, FACSIMILE, TELETYPE, PHOTO-LAB & MAINT FOR MAJORITY OF EQUIPMENT INCL LIMITED ENGR SUPPORT. ARMY AVN/USAF ACFT CAN BE ARRANGED. CALIBRATION AND METEOROLOGICAL SPT AVAIL. INST FOR MOST ITEMS AVAIL, CAN OBTAIN OTHER INSTRUMENTS. MOVING TARGET SYSTEM, EOD, STATISTICAL, MAINT EVALUATION, AND HUMAN FACTORS CAPABILITIES AVAILABLE. COMPUTER SUPPORT AVAILABLE. TEMPERATURES TO -50 DEG FAHR COMMON.

INSTALLATION: COMBAT SYSTEMS TEST ACTIVITY

ABERDEEN PVG GRD, MD

CDR: COL ROY E. FOULCH

TECH DIRECTOR: JAMES C. KELTON

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	58.811	70.106
TOTAL PROCUREMENT	32.648	35.880
TOTAL O&M	2.909	3.844
TOTAL OTHER	3.574	4.814
TOTAL ANNUAL LAB	97.942	114.644
TOTAL INHOUSE	66.139	79.101
TOTAL INHOUSE RDTE	38.089	46.955
ANNUAL OPERATING COST	18.883	19.258

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	219	0	23	196
CIVILIAN	1137	8	393	744
TOTAL	1356	8	416	940

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
228650	720.999 4.351 248.742 974.092	22.176 144.108

...MISSION

PLAN, CONDUCT, & RPT TESTS ON WPNS, WPNS SYS, TRACKED & WHEELED VEH, FIRE CONTROL & TGT AQUISITION EQUIP, AMMO & MUNITIONS COMPONENTS, TRP SPT EQUIP & ARMOR PLATE FOR ALL AMC INSTALL & ACTIVITIES. PROVIDE SVC SPT TO APG ELEMENTS & SPT COMMANDS.

...CURRENT IMPORTANT PROGRAMS

M88A1E1 RECOVERY VEHICLE
120MM MORTAR
BFVS A2
M1A1 ABRAMS
TRUCK, 5 TON

...FUNCTIONS/EQUIPMENT/FACILITIES

TEST AREA 75K ACRES. 22500M RANGE TO LAND IMPACT. 26000M RANGE TO WATER IMPACT. 41 MILES OF VEH COURSES INCL 27 TEST/OBSTACLE COURSES & ENVIRONMENTAL/COND EQUIP. CHAMBERS FOR SUBJECTING EQUIP TO SALT SPRAY OR SOLAR RADN. ISOLATED VIBRATION TEST FAC FOR SHAKING EXPLO EQUIP SIMULTANEOUSLY W/TEMP COND FAC F/CONTROLLED TESTS OF ELEC CONTROL & GUID EQUIP. FREQ SOURCE FOR TESTING ALL TYPES OF MATL IN HIGH INTENSITY ELEC MAGNETIC RADN. FAC F/TEST OF ARMOR PLATE. VEL & TGT EQUIP IS AVAIL F/OBSERVATION DURING RAPID FIRE OF RKT TRACK F/CONTROLLED TERMINAL BALLISTIC TESTS. FAC AVAIL F/TESTS OF SPECIAL ELEC & FIRE CONTROL EQUIP & RELATED SYS COMPONENTS. PULSE RADN FAC AVAIL FOR RADN TEST OF NUCLEAR EFFECTS. INSTRUMENTED RANGES FOR VULNERABILTY TESTING OF GROUND BASED SYSTEMS.

INSTALLATION: CONSTRUCTION ENGINEERING RESEACH LAB

CHAMPAIGN, IL

CDR: CARL O. MAGNELL

TECH DIRECTOR: LOUIS R. SHAFFER

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	37.856	34.454
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	11.918	10.758
TOTAL OTHER	1.643	1.475
TOTAL ANNUAL LAB	51.417	46.687
TOTAL INHOUSE	30.206	27.829
TOTAL INHOUSE RDTE	22.713	21.069
ANNUAL OPERATING COST	3.960	3.807

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	4	0	4	0
CIVILIAN	212	44	188	24
TOTAL	216	44	192	24

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
31	130.937 15.068 25.905 171.910	8.200 27.756

...MISSION

PLAN AND EXECUTE RESEARCH TO OBTAIN THE BEST COMBINATION OF ENGRG DESIGN, CONSTRUCTION (INCLUDING ENVIRONMENTAL QUALITY RQMTS), OPERATIONS AND MAINTENANCE TO PROVIDE FACILITIES FOR THE MILITARY AND THE NATION AT LEAST COST AND TO DISSEMINATE THOSE RESULTS.

...CURRENT IMPORTANT PROGRAMS

ENVIRONMENTAL QUALITY MGMT & SYSTEMS & TRAINING LANDS RESTORATION
ENERGY CONSERVATION AND SYSTEMS FOR MILITARY INSTALLATIONS
IMPROVED SYSTEMS FOR THE RPMA OF MILITARY FACILITIES
MATERIALS SYSTEMS FOR LARGE STRUCTURES IN SPACE
COMPUTER-AIDED DESIGNS FOR PLANNING, DESIGN AND MANAGEMENT

...FUNCTIONS/EQUIPMENT/FACILITIES

CONTROLLED ENV CHAMBERS; ION PLATING UNIT; 1000000# CLOSED-LOOP MTL SYSTEM; SCANNING ELECTRON MICROSCOPE; SEMI-AUTO WELDING EQMT, BIAxIAL SHOCK TEST MACHINE; NDT FACILITY; VACUUM INDUCTION FURNACE; METALOGRAPHIC SAMPLE PREP, X-RAY DIFFRACTION AND VACUUM SPECTROSCOPY SYSTEM; DYNAMIC TENSION ANALYSIS SYSTEM; DIGITAL RECORDING ANALYSIS EQMT; AND HVAC TEST CAPABILITIES INCLUDING SYSTEMS BLDG METHODS AND TECHNIQUES; COMPUTER-BASED DESIGN AND CONSTRUCTION MGMT TECHNIQUES; ENERGY SYSTEMS DESIGN; ENERGY CONSERVATION AND ALTERNATE FUELS; HARDENED FACILITIES ANALYSIS ENVIRONMENTAL QUALITY MGMT; POLLUTION CONTROL ABATEMENT; TRAINING AREA MAINTENANCE, MGMT AND RESTORATION; MOBILIZATION FACILITIES; ENERGY RESEARCH; PHYSICAL SECURITY; AND CORROSION CONTROL.

INSTALLATION: DUGWAY PROVING GROUND

DUGWAY, UTAH

CDR: COL JAN A. VAN PROOYEN

TECH DIRECTOR: DR. LOTHAR L. SALOMON

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	57.100	53.474
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	3.264	1.076
TOTAL OTHER	20.594	23.653
TOTAL ANNUAL LAB	80.958	78.203
TOTAL INHOUSE	35.813	39.533
TOTAL INHOUSE RDTE	26.527	29.071
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	144	1	58	86
CIVILIAN	786	20	115	671
TOTAL	930	21	173	757

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
803364	139.987 200.000 1721.378 2061.365	63.000 47.500

...MISSION

PLAN, CONDUCT, AND REPORT ON APPROVED TESTS TO ASSESS MILITARY VALUE OF CONVENTIONAL ILLUMINATING & CHEM WEAPONS, SMOKE/OBSCUR & CHEM-BIO DEF SYS. DOD JOINT CONTACT POINT FOR CHEM, BIO DEF TECHNICAL ASSESS AND OP TESTS OF LOGISTICAL CONCEPTS. MANAGE INSTALL AS A DOD MRTFB

...CURRENT IMPORTANT PROGRAMS

CONDUCTS SERVICE DEV CML CML-BIO DEFENSE SMOKE/OBSCURANT TEST PROGRAMS
CONDUCTS R&D AND LAB INVESTIGATIONS NECESSARY TO SUPPORT MISSION
CONDUCTS JOINT OP CML & CML-BIO DEF TESTS/STUDIES FOR CINCS, SERVICES
CONDUCTS MUNITION DEVELOPMENT/ACCEPTANCE AND PRODUCTION TESTING
CONDUCTS ENVIRONMENTAL STUDIES TO SUPPORT DUGWAY AND ARMY PROGRAMS

...FUNCTIONS/EQUIPMENT/FACILITIES

FACILITY CAPABILITY & MAJOR EQUIP FOR CONDUCTING TESTS ARE: INSTR GRIDS FOR CHEM & CHEM/BIO & SMOKE OBSCUR; ARTILLERY RANGES FOR CONVENTIONAL & CHEM METAL PARTS; BALLISTIC & DISSEM TESTS WITH FIELD SAMPLING, SAMPLING MASS ANALY, MET (AUTO DATA ACQ & MESOMET NETWORK) SYS. TSPI(RADAR SLAVE PHOTO) SYS, PHYS & ENVIRON (MIL SPEC 810) CHAMBERS FOR TOTAL AGENT CONTAINMENT, OPNS SUPPORTED BY MET RESEARCH ON CLOUD BEHAVIOR, CHEM & LIFE SCI TECH, ECOLOGICAL SURVL, OPNS RESEARCH, LABS FOR CHEM, MICROBIO, TOXICAL IMMUN, ECOLOG POLLUTION, CONTROL STUDIES TO PRODUCE BIO SIMULANT AGENTS, TECH & MASS ASSAY OF FLUOR AIR TRACERS, & RANGE COMM DOD MAJ RANGE TEST FAC BASE (MRTFB) WITH LARGE LAND AREAS, RESTRICTED AIR SPACE, LONG & FLAT ARTILLERY RANGES, PROJECTILE RECOVERY, SONIC & ELECTROMAG STERILITY

INSTALLATION: ELECTRONIC PROVING GROUND

FT HUACHUCA, AZ

CDR: COL JEROME P. GRIPPE

TECH DIRECTOR: MR. GRADY H. BANISTER, JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	31.104	37.947
TOTAL PROCUREMENT	4.009	6.015
TOTAL O&M	12.899	7.989
TOTAL OTHER	15.542	17.438
TOTAL ANNUAL LAB	63.554	69.389
TOTAL INHOUSE	34.237	33.734
TOTAL INHOUSE RDTE	19.596	23.907
ANNUAL OPERATING COST	11.969	11.499

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	597	0	52	545
CIVILIAN	227	1	94	133
TOTAL	824	1	146	678

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
34346	2.316	28.042	314.227	344.585	13.518	2.500

...MISSION

PLAN, CONDUCT, EVALUATE AND REPORT ON DEVELOPMENT AND OTHER ENGINEERING LAB-TYPE TESTS OF GROUND AND AIRBORNE EQUIPMENT AND SYSTEMS THAT UTILIZE ELECTRONIC/ELECTROMAGNETIC TECHNOLOGY. MAINTAIN MODERN TEST FACILITY, INSTRUMENTATION AND METHODOLOGY CAPABILITY.

...CURRENT IMPORTANT PROGRAMS

TRAILBLAZER, AN/TSQ-114B
MOBILE SUBSCRIBER EQUIPMENT (MSE)
NAVSTAR GLOBAL POSITION SYSTEM (GPS) ARMY USER EQUIPMENT (AUE)
ENHANCED POSITION LOCATION REPORTING SYSTEM (E-PLRS)
JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM (JTIDS)

...FUNCTIONS/EQUIPMENT/FACILITIES

CONDUCT TESTS OF HDWR/SOFTWARE, DOCTRINAL CONCEPTS/SCENARIOS TEST CAPABILITY INCL TEST OF COMM, IMAGERY INTERPRETATION MET, RADIAC, RDR, LASER INTEL, EW, CMD/CTRL, PWR SOURCES, RPV, GND&SCTY SENSORS SYS/EQUIP, EMC, EMI, EMV, ECM, ECCM, TEMPEST AND INTRA/INTEROPERABILITY ANAL AS REQ. TECHNIQUES CONTAIN BENCH/FIELD TEST W/ACCESS TO EXTENSIVE REAL ESTATE, MATH MDL AND SIM FACS (EM, CLIMATIC/STRUCT ENVIRON, INSTRUMENTED SPACE POS RG [3 FPS-16/CAPRI], TEMPEST, C3I SYS TEST, REALISTIC EM BATTLEFIELD ANTENNA PATTERN, ELECTRO-OPT AND VARIOUS ENVIRON FACS INCL NUC). PERFORM RELIABILITY, AVAILABILITY AND MAINTAINABILITY (MAINT MANUALS, REPAIR PARTS, SPECIAL TOOLS), SAFETY, AND HFE TEST. CONDUCT/PARTICIPATE IN RELATED DOCTRINAL AND CONCEPT STUDIES AND TEST FOR ARMY, OTHER SERVICES AND DOD AGENCIES.

INSTALLATION: ELECTRONICS TECHNOLOGY AND DEVICES LAB

FT. MONMOUTH, NJ

DIR: DR. C.G. THORNTON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	74.322	72.970
TOTAL PROCUREMENT	1.052	0.276
TOTAL O&M	3.476	0.870
TOTAL OTHER	1.305	0.450
TOTAL ANNUAL LAB	80.155	74.566
TOTAL INHOUSE	21.218	16.793
TOTAL INHOUSE RDTE	16.062	15.770
ANNUAL OPERATING COST	1.421	1.700

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1	0	1	0
CIVILIAN	301	39	180	121
TOTAL	302	39	181	121

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF LAB	SQUARE FEET ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	92.040	47.000	2.000	141.040	34.520	26.000

...MISSION

DEVELOP AND TRANSITION CRITICAL ELECTRONIC TECHNOLOGIES AND DEVICES INTO PRESENT AND FUTURE GENERATION ARMY SYSTEMS; MILLIMETER WAVES, MICROWAVES, PULSE POWER, MICROELECTRONICS, ANALOG SIGNAL PROCESSING, FREQUENCY CONTROL, DISPLAYS, AND TACTICAL POWER SOURCES

...CURRENT IMPORTANT PROGRAMS

OPTICALLY ADVANCED SWITCH (OAS)
PARTS OBSOLESCENCE AVOIDANCE FOR SINGGARS
LOW COST FOCAL PLANE ARRAYS
RECHARGEABLE LITHIUM BATTERY
VHSIC PHASE II PROGRAM

...FUNCTIONS/EQUIPMENT/FACILITIES

PULSE POWER CENTER PROVIDES A SECURE FACILITY FOR RDTE OF EXTREMELY HIGH ENERGY PULSE POWER CONDITIONING COMPONENTS THAT ARE NECESSARY TO ACHIEVE 2-3 ORDERS OF MAGNITUDE INCREASE IN ENERGY DELIVERED BY PULSE POWER COND COMPNTS AND SUBSYSTEMS FOR DIRECTED ENERGY WEAPONS, ELECTROMAGNETIC AND ELECTROTHERMAL GUNDS, AND ELECTRIC DRIVE VEHICLES. THE STATE-OF-THE-ART CLASS 10-100 MICROFABRICATION CENTER SERVES THE BROAD SPECTRUM OF DOD/ ARMY ELECTRONIC NEEDS SUCH AS: APPLICATION SPECIFIC INTEGRATED CIRCUITS (ASIC), SURFACE ACOUSTIC WAVE (SAW) DEVICES. MICROWAVE/MILLIMETER-WAVE MONOLITHIC INTEGRATED CIRCUITS (MIMIC), DISPLAY DEVICES AND MANY IR&D MATERIALS/PROCESSES PROGRAMS.

INSTALLATION: ENGINEER TOPOGRAPHIC LABORATORIES

FT. BELVOIR, VA

DIR: COL ALAN A. LAUBSCHER

TECH DIRECTOR: MR. WALTER E. BOGE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	100.894	89.748
TOTAL PROCUREMENT	0.000	0.434
TOTAL O&M	7.103	16.545
TOTAL OTHER	0.551	0.739
TOTAL ANNUAL LAB	108.548	107.466
TOTAL INHOUSE	15.786	17.446
TOTAL INHOUSE RDTE	12.404	12.542
ANNUAL OPERATING COST	5.195	4.624

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	12	1	6	6
CIVILIAN	320	15	203	117
TOTAL	332	16	209	123

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
0	121.772	9.749	36.998	168.519	22.400	14.000

...MISSION

RESEARCH AND DEVELOPMENT IN TOPOGRAPHY SCIENCES; MAPPING, POINT POSITIONING, GEOGRAPHIC INFORMATION, OPERATIONAL SUPPORT TERRAIN ANALYSIS, AND SCIENTIFIC/ADVISORY SERVICES; REMOTE SENSING/DIGITAL ANALYSIS AND ENVIRONMENTAL EFFECTS DATA.

...CURRENT IMPORTANT PROGRAMS

SUPPORT TO ARMY SPACE PROGRAM
DIGITAL TOPOGRAPHIC SUPPORT SYSTEM
AIRLAND BATTLEFIELD ENVIRONMENT DEMONSTRATOR
AUTONOMOUS LAND VEHICLE W/DARPA
MANAGING ARMY USE OF DIGITAL TOPOGRAPHIC DATA

...FUNCTIONS/EQUIPMENT/FACILITIES

FACILITIES INCLUDE A COMPUTER IMAGE GENERATION FACILITY TO STUDY AND DEMONSTRATE COMPUTER TECHNIQUES FOR 3-D PROSPECTIVE DISPLAYS OF TOPOGRAPHIC AND OPERATIONAL INFORMATION. A DIGITAL IMAGE PROCESSING FACILITY WITH ADVANCED DISPLAYS AND DIGITAL DISPLAY ANALYSIS CAPABILITIES. AN ARTIFICIAL INTELLIGENCE TEST BED FOR DEVELOPING AUTOMATED IMAGERY ANALYSIS AND FEATURE EXTRACTION TECHNIQUES AND METHODOLOGY USING SIDE LOOKING RADAR IMAGERY AS A DATA SOURCE. IN-HOUSE COMPUTER SYSTEMS INCLUDE CYBER 170/730, DEC VAX MODELS 750/780/785, MILVAX II, GRID CASE MILITARIZED LAP TOP, CONTAL VISION ONE/20 IMAGE ANALYSIS SYSTEM, PIXAR ADVANCED DISPLAY ENVIRONMENT.

INSTALLATION: ENGINEER WATERWAYS EXPER. STATION

VICKSBURG, MS

DIR: COL L. B. FULTON

TECH DIRECTOR: DR. R. W. WHALIN

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	54.146	59.000
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	3.723	0.300
TOTAL OTHER	57.982	60.000
TOTAL ANNUAL LAB	115.851	119.300
TOTAL INHOUSE	106.567	109.200
TOTAL INHOUSE RDTE	45.484	49.000
ANNUAL OPERATING COST	17.800	18.100

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	21	1	12	9
CIVILIAN	1517	133	679	838
TOTAL	1538	134	691	847

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
3073	1798.808	353.645	176.809	2329.262	59.300		61.809

...MISSION

MIL & CIV R&D IN HYDRAULICS; ECOLOGY; COASTAL ENG; PAVEMENTS; ROCK; CONCRETE; SOIL; WEAPON EFF; VEHICLE MOBILITY; COUNTERMOBILITY; ENVIRONMENTAL EFFECTS; OF MIL OPERATIONS; OPERATE TECH LIBRARY & INFO ANALYSIS CTRS; GOVT CEMENT POZZOLANA TEST PROGRAM SERVES DOD, DOE, EPA & OTHER FEDERAL AGENCIES.

...CURRENT IMPORTANT PROGRAMS

PHY & NUM MODELING TO SOLVE RIVER, COASTAL, ECOLOG., ENVIRON & STRUC PROBS; R&D OF CEMENT MATLS; MASS/STRUCT CONC; COMP STRUCT ENG CONT METHODS; R&D OF NEW PAVEMENTS & FOUNDATIONS; DES OF PROTECTIVE AND HARDENED FACIL; R&D OF WEAPONS & ENVIRON EFFECTS; BARRIERS & OBSTACLES; LOGISTICS SUPPORT R&D OF VEH MOB; FIXED FAC CAMOU; MIL HYDROLOGY; MINE LOCA & NEUTRALIZATION.

...FUNCTIONS/EQUIPMENT/FACILITIES

DOES GEN INVEST IN HYDRAULICS, SOIL & ROCK MECHAN, CONC, VEH MOBIL WPNS EFF, ECOLOGY; COASTAL ENG; MINE/CNTRMINE; CAMOUFLAGE; MATS & EQUIP TEST PROTECTIVE STRUC; STRUC, PAVEMENT, FOUNDATION DESIGNS; EARTH QUAKE ENG; AQUATIC PL CONT WES OWNS BLDGS, TEST SITES, SPECIAL AND OTHER PLANT & SUP EQ INHSE & AT OTHER LEASED AREAS. FACILITIES INCLUDE HYD FLUMES, WAVE GENERATORS, SHIP NAV SIMULATOR, STATE-OF-THE-ART WATER QUALITY, SOILS, CONC, CHEM, CALIB, ENVIRONMENTAL & LIMNOLOGY LABS, NUM & PHY MODELING CAPABILITIES IN HYD, COASTAL & STRUCTURAL ENG, MOBILTY TEST FAC, 1 MIL LB DYN LOAD MACH, WHEELED LOAD CARTS, BLAST EFFECTS TEST FACILITY, HIGH & LOW FREQ VIBRATORS, EL/BEM MICROSCOPE, ARMY SUPER COMP FAC & TECH LIBRARY, PRINTING PLANT. WITH MSU, LSU, TAMU WES ESTABLISHED IN HOUSE A GRADUATE LEVEL TRAINING INSTITUTE.

INSTALLATION: HARRY DIAMOND LABORATORIES

ADELPHI, MD

DIR: DONALD DINGER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	120.488	114.543
TOTAL PROCUREMENT	16.669	20.076
TOTAL O&M	3.481	2.761
TOTAL OTHER	3.519	1.082
TOTAL ANNUAL LAB	144.157	138.462
TOTAL INHOUSE	51.329	54.630
TOTAL INHOUSE RDTE	42.784	47.441
ANNUAL OPERATING COST	12.000	12.300

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	3	2	3	0
CIVILIAN	640	43	406	234
TOTAL	643	45	409	234

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2316	503.364	12.053	121.717	637.134	55.005	61.607

...MISSION
RESPONSIBLE FOR TECHNOLOGY BASE PROGRAM, TECHNOLOGY DEMONSTRATIONS AND TECHNOLOGY LEADERSHIP IN ASSIGNED MISSION AREAS. IN ORDER TO INSURE TECHNOLOGY INSERTION, PERFORM ENGINEERING DEVELOPMENT, PRODUCTION SUPPORT AND TROOP SUPPORT ON A SELECTIVE BASIS.

...CURRENT IMPORTANT PROGRAMS
NUCLEAR SURVIVABILITY TECHNOLOGY
HIGH POWER MICROWAVE TECHNOLOGY
ELECTRONIC FUZING AND SELF-CONTAINED MUNITIONS
INFORMATION AND SIGNAL PROCESSING
ADVANCED RADAR TECHNOLOGY

...FUNCTIONS/EQUIPMENT/FACILITIES
FUZE TEST FACILITIES: ARTILLERY SIMULATORS, ENVIRONMENTAL TESTING.
BLOSSOM POINT TEST AREA.
NUCLEAR FACILITIES: GAMMA RAY SIMULATOR (AURORA), HIGH INTENSITY FLASH X-RAY (HIFX), COBALT 60, ELECTROMAGNETIC PULSE SIMULATORS.
ELECTRONIC DESIGN FACILITIES: THICK FILM HYBRID CIRCUIT FACILITY, MICROELECTRONIC DESIGN FACILITY, MICROWAVE ANECHOIC CHAMBERS.

INSTALLATION: HUMAN ENGINEERING LABORATORY

ABERDEEN PVG GRD, MD

DIR: DR. JOHN D. WEISZ

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	23.166	27.000
TOTAL PROCUREMENT	0.100	0.100
TOTAL O&M	0.497	0.400
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	23.763	27.500
TOTAL INHOUSE	13.393	15.300
TOTAL INHOUSE RDTE	13.096	15.000
ANNUAL OPERATING COST	5.400	5.900

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	36	4	17	19
CIVILIAN	169	16	120	49
TOTAL	205	20	137	68

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
72	111.524	7.055	21.400	139.979	12.500	22.500

...MISSION

CONDUCTS FUNDAMENTAL AND APPLIED RESEARCH IN HUMAN FACTORS ENGINEERING.
 PROVIDES DIRECT DESIGN SUPPORT TO ALL MATERIEL DEVELOPMENT PROBLEMS
 SPONSORED BY AMC. SERVE AS AMC LEAD AGENCY FOR ROBOTICS IN AN
 ENVIRONMENT OTHER THAN MANUFACTURING.

...CURRENT IMPORTANT PROGRAMS

ROBOTICS/LOGISTICS R&D/ARTIFICIAL INTELLIGENCE
 HFE ASSESSMENTS
 HFE SUPPORT TO ARMY VEHICLES/WEAPON SYSTEMS
 HFE SUPPORT TO INDIVIDUAL SOLDIER/WEAPONS
 SOLDIER PERFORMANCE BASIC RESEARCH

...FUNCTIONS/EQUIPMENT/FACILITIES

COMMAND POST EXERCISE FACILITY
 ACE COMPUTER FACILITY
 FIRE CONTROL RESEARCH FACILITY
 DATA ACQUISITION & BIOTELEMETRY SYSTEM
 ACOUSTICAL AND ANECHOIC CHAMBER REVERBERANT FACILITY
 HELFAST LOGISTICS TESTING FACILITY
 MOBILITY/PORTABILITY COURSE
 SMALL ARMS TEST FIRING RANGE
 WOOD AND METAL WORKING FACILITY
 OCULOMETER/EYE MOVEMENT FACILITY
 INDOOR SMALL ARMS RANGE
 HUMAN FACTORS HOWITZER TEST BED

INSTALLATION: INSTITUTE OF DENTAL RESEARCH

WASHINGTON, DC

CDR: COL HAROLD E. PLANK

SCIENTIFIC DIR: DR. GINO C. BATTISTONE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	5.452	3.556
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.283	2.279
TOTAL ANNUAL LAB	7.735	5.835
TOTAL INHOUSE	2.921	2.532
TOTAL INHOUSE RDTE	2.921	2.532
ANNUAL OPERATING COST	0.968	0.691

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	58	11	42	16
CIVILIAN	18	3	5	13
TOTAL	76	14	47	29

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)				REAL	PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL			
0	10.852	5.696	1.200	17.748	0.000		4.562

...MISSION

CONDUCT RESEARCH ON TREATMENT OF COMBAT FACIAL INJURIES, INFECTIONS, FIELD DENTL EMERGENCIES, SYNTHETIC & ALLOGENIC MATERIALS FOR USE AS IMPLANTS TO REPLACE LOST HARD & SOFT TISSUE, FIELD DENTAL EQUIPMENT & MATERIALS, AND TECHNIQUES FOR RAPID DIAGNOSIS OF CHEMICAL CASUALTIES.

...CURRENT IMPORTANT PROGRAMS

HAND-HELD X-RAY SUCCESSFULLY FIELD-TESTED.
COMPUTER-ASSISTED POSTMORTEM ID SYSTEM APPROVED BY VICE CHIEF, ARMY.
POLYMER-AAA BONE MATERIAL EFFECTIVE REPAIRING OSSEOUS DEFECTS.
IN-HOUSE CAPABILITY TO PRODUCE BONE AGENT OSTEOGENIN.
DEVELOPED SUPERIOR BONE REPAIR MATRIX.

...FUNCTIONS/EQUIPMENT/FACILITIES

BUILDINGS 40 AND 91, WALTER REED ARMY MEDICAL CENTER, WASHINGTON, DC;
BUILDINGS 2801, 2802, 2804, 2805, 2810, 2831, 2832, FORT GEORGE G. MEADE MD; MICROSCOPES - SEM - TEM; FLUORESCENT MICROSCOPE WITH VIDEO PLAN SYSTEM; GAS CHROMATOGRAPH MASS SPECTROMETER WITH DATA SYSTEM; FTIR INFRARED ANALIZER; NMR SPECTROMETER; IMAGE INTENSIFIER QUATIMET; MICRO TOME SYSTEM HARD TISSUE; LIQUID AND GAS CHROMATOGRAPHS; ATOMIC ABSORPTION SPECTROPHOTOMETERS.

INSTALLATION: INSTITUTE OF SURGICAL RESEARCH

FT SAM HOUSTON, TX

CDR: COL BASIL A. PRUITT, JR

CHIEF, LAB DIV: DR. ARTHUR D. MASON

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	5.349	5.830
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.009	0.000
TOTAL OTHER	6.374	6.104
TOTAL ANNUAL LAB	11.732	11.934
TOTAL INHOUSE	5.117	4.921
TOTAL INHOUSE RDTE	4.118	4.326
ANNUAL OPERATING COST	1.165	1.200

PERSONNEL DATA (E) OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	153	17	56	97
CIVILIAN	78	4	23	55
TOTAL	231	21	79	152

SPACE AND PROPERTY

ACRES	SPACF (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
1	26.424 1.800 22.400 50.624	6.958 6.542

...MISSION

INVESTIGATE PROBLEMS OF MECHANICAL AND THERMAL INJURIES WITH THEIR COMPLICATIONS; CARE FOR PATIENTS WITH SUCH INJURIES; TEACH AND TRAIN OTHER PERSONNEL IN THE MANAGEMENT OF SUCH PATIENTS; AND CONDUCT INVESTIGATIVE STUDIES AT BOTH THE BASIC AND CLINICAL LEVELS

...CURRENT IMPORTANT PROGRAMS

BURN INFECTION TREATMENT AND PREVENTION
INEQUALITY OF VA/Q RATIOS FOLLOWING SMOKE INHALATION AND ITS EFFECTS.
DERIVATIVE SPECTROSCOPY CHEMILUMINIGENIC PROBING OF GRANULOCYTE REDOX.
PRELIMINARY STUDIES OF ZINC HOMEOSTATIC CONTROL AND IMMUNOCOMPETENCE.
ROLE OF THYROID HORMONES IN BURN PATHOPHYSIOLOGY.

...FUNCTIONS/EQUIPMENT/FACILITIES

OPERATE FORTY BEDS FOR SERIOUSLY BURNED AND INJURED PATIENTS. PROVIDE CLINICAL LABORATORY SUPPORT AND RESEARCH CAPABILITIES IN THE FIELDS OF PATHOLOGY (INCLUDING USE OF ELECTRON MICROSCOPE), MICROBIOLOGY, EXPERIMENTAL SURGERY AND BIOCHEMISTRY. MAINTAIN AN ANIMAL COLONY, ELECTRONIC SHOP, MACHINE SHOP, COMPUTER FACILITY AND MEDICAL LIBRARY.

INSTALLATION: LETTERMAN ARMY INSTITUTE OF RESEARCH

PRESIDIO, SF, CA

CDR: COL EDWIN S. BEATRICE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	18.283	11.424
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.151	0.059
TOTAL OTHER	5.725	5.663
TOTAL ANNUAL LAB	24.159	17.146
TOTAL INHOUSE	13.465	8.738
TOTAL INHOUSE RDTE	12.979	8.568
ANNUAL OPERATING COST	5.776	2.532

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	142	36	101	41
CIVILIAN	99	19	53	46
TOTAL	241	55	154	87

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
9	119.204	56.941	112.174	288.319	46.450	13.115

...MISSION

TO CONDUCT MEDICAL RESEARCH IN: BIOEFFECTS OF EYE PROTECTION AGAINST LASERS; BLOOD PRESERVATIONS; BLOOD SUBSTITUTES; RESUSCITATION METHODS FOR USE IN FORWARD AREAS; DERMAL PROTECTION FROM CHEM AGENTS AND VECTOR BORNE DISEASE; R&D TESTING IN TOXICOLOGY; FORWARD AREA CASUALTY CARE.

...CURRENT IMPORTANT PROGRAMS

DETERMINATION OF SAFE THRESHOLDS OF LASER RADIATION.
RESUSCITATION SOLUTIONS FOR USE FORWARD OF DEFINITIVE MEDICAL CARE.
ACUTE AND CHRONIC MAMMALIAN AND IN VITRO TOXICOLOGY.
CUTANEOUS PROTECTION AGAINST HAZARDS IN A COMBAT ENVIRONMENT.
FORWARD CARE TRAUMATIC SHOCK AND MISSILE INJURIES.

...FUNCTIONS/EQUIPMENT/FACILITIES

MULTIPLE WAVELENGTH LASERS, TERRAIN MODEL FOR EVALUATING TRACKING OPERATOR PERFORMANCE FOLLOWING SIMULATED LASER EXPOSURE, CONVENTIONAL BLOOD STORAGE, SEPARATION AND ANALYSIS LABS TO INCLUDE MASS SPECTROMETRY GAS AND HIGH PERFORMANCE LIQUID CHROMATOGRAPHY, SURGICAL SUITES WITH ON-LINE MULTI-CHANNEL PHYSIOLOGIC MONITORS, GERM FREE AND OPEN ANIMAL FACILITIES HOUSING MANY SPECIES FROM NUDE MICE TO SUB-HUMAN PRIMATES, COMPUTERS FOR ADMIN AND TECHNICAL/SCIENTIFIC DATA ANALYSIS, GENERAL RESEARCH LABS FULLY EQUIPED WITH SPECTROMETERS, GAMMA AND SCINTILLATION COUNTERS, TRANSMISSION, SCANNING AND ELECTRON MICROSCOPES, COLD ROOM FOR FRACTIONATION, AND THE LIKE.

INSTALLATION: MATERIALS TECHNOLOGY LABORATORY

WATERTOWN, MA

DIR: DR. EDWARD S. WRIGHT

DEPUTY DIRECTOR: MAJ M. ADAMS

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	35.249	36.121
TOTAL PROCUREMENT	0.062	0.000
TOTAL O&M	3.763	3.425
TOTAL OTHER	11.137	9.062
TOTAL ANNUAL LAB	50.211	48.608
TOTAL INHOUSE	50.211	48.608
TOTAL INHOUSE RDTE	35.249	36.121
ANNUAL OPERATING COST	31.907	35.550

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	9	0	9	0
CIVILIAN	557	70	255	302
TOTAL	566	70	264	302

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
48	424.773	42.010	22.133	488.916	27.132	4.543

...MISSION

MANAGE & CONDUCT THE ARMY'S MATERIALS RESCH & DEVELOP PGM. SUPPORT AMC SUBORD CMDS THROUGH DEVELOPMENT OF NEW & IMPROVED MATERIALS, DESIGN PROTOTYPES, LIMITED PROD & MANUFACTURE OF WEAPON SYS COMPONENTS & FAILURE ANALYSIS OF ARMY SYSTEMS, ARMY'S CENTER OF EXCEL FOR COMPOSITE MATLS. LEAD LAB FOR MATLS, STRUCTURAL INTEGRITY, SOLID MECH, MATL TESTING & ARMOR

...CURRENT IMPORTANT PROGRAMS

COMPOSITE HULL TECHNOLOGY DEMONSTRATION
OXYNITRIDE GLASS FIBERS-REINFORCED COMPOSITES; ADHESIVE BONDING
CORROSION PROTECTION
ION BEAM SURFACE MOD
SUPERCONDUCTIVITY/ELECTROMAGNETIC MATERIALS

...FUNCTIONS/EQUIPMENT/FACILITIES

ION IMPLANTATION FACILITY
DU/Be METALS RESEARCH & DEVELOPMENT
2 MeV X-RAY RADIOGRAPHY FACILITY
COMPOSITES PROCESSING FACILITY
BONDING/ADHESIVES PROCESSING LAB
MATERIALS CHARACTERIZATION FACILITY
DETONICS FACILITY
GAS GUN IMPACT TEST FACILITY
BALLISTIC RANGES
ROBOTICS/AUTOMATED CONTROL LAB/ METAL PRIMARY PROCESSING FACILITY
MECHANICAL TEST LAB/ CERAMIC DEVELOPMENT PROCESSING FACILITY
SURFACE ENGINEERING LAB.

INSTALLATION: MATERIEL SYSTEMS ANALYSIS ACTIVITY

ABERDEEN PVG GRD, MD

DIR: MR. KEITH A. MYERS

DEP DIRECTOR: COL RICHARD E. HULL

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	32.644	34.864
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	4.478	4.319
TOTAL OTHER	1.433	8.922
TOTAL ANNUAL LAB	38.555	48.105
TOTAL INHOUSE	24.676	33.933
TOTAL INHOUSE RDTE	20.419	22.328
ANNUAL OPERATING COST	3.973	4.141

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	28	0	13	15
CIVILIAN	432	15	264	168
TOTAL	460	15	277	183

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
4	8.140	1.276	1.715	11.131	2.870		2.500

...MISSION

DEVELOP FOR ARMY A BASIS OF INFORMATION AND UNDERSTANDING, PRIMARILY CONCERNING SYSTEM PERFORMANCE, EFFECTIVENESS, RELIABILITY, SUPPORT AND INTEGRATION IN TERMS OF CAPABILITIES AND LIMITATIONS LEADING TO DECISIONS WHICH PROVIDE THE ARMY WITH THE PROPER MATERIEL

...CURRENT IMPORTANT PROGRAMS

ABRAMS TANKS SYSTEM - MIAI
SINGLE CHANNEL GROUND AND AIR RADIO SUBSYSTEM - SINGCARS
REMOTLY PILOTED VEHICLE - RPV
BRADLEY FIGHTING VEHICLE SYSTEM - BFVS
MANEUVER CONTROL SYSTEM - MCS

...FUNCTIONS/EQUIPMENT/FACILITIES

AMSAA MISSION CAPABILITIES INCLUDE: PERFORMING INDEPENDENT TEST DESIGN AND OVERALL EVALUATION FOR DECISIONS ON MAJOR, DESIGNATED NON-MAJOR AND SELECTED OTHER SYSTEMS; PROVIDING OVERVIEW ON LIFE CYCLE SURVEILLANCE PROGRAMS FOR MATERIEL SYSTEMS INVENTORY; PROVIDING WEAPON SYSTEM EFFECTIVENESS ESTIMATES FOR COST AND OPERATING EFFECTIVENESS ANALYSIS; PROVIDING SYSTEMS ANALYSIS SUPPORT TO AMC MAJOR SUBORDINATE COMMANDS, PROGRAM EXECUTIVE OFFICERS, DA STAFF AND PROJECT/PRODUCT MANAGERS; MAINTAINING DIRECT CONTACT WITH MATERIEL USERS IN THE FIELD; SERVING AS THE AMC FIELD ACTIVITY FOR ADMINISTERING THE JOINT TECHNICAL COORDINATING GROUP FOR MUNITIONS EFFECTIVENESS (JTCG/ME) AND PERFORMING LOGISTICS AND READINESS RELATED ANALYSIS.

INSTALLATION: MEDICAL MATERIEL DEVELOPMENT ACTIVITY

FT. DETRICK, MD

CDR: COL HARRY G. DANGERFIELD

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	59.129	49.481
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.658	1.976
TOTAL ANNUAL LAB	60.787	51.457
TOTAL INHOUSE	4.284	4.112
TOTAL INHOUSE RDTE	4.284	4.112
ANNUAL OPERATING COST	0.710	0.523

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	23	8	18	5
CIVILIAN	34	5	10	24
TOTAL	57	13	28	29

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	0.000	12.864	0.000	12.864	0.532	0.120

...MISSION

EXERCISE FULL LINE AUTHORITY OVER THE LIFE CYCLE INTEGRATED MATERIAL MANAGEMENT OF ALL ASSIGNED SYSTEMS AND/OR PRODUCTS IN ACHIEVING A BALANCED PROGRAM TO ACCOMPLISH THE MATERIAL DEVELOPER'S STATED OBJECTIVES.

...CURRENT IMPORTANT PROGRAMS

RAPID IDENTIFICATION SYSTEM.
PERSONAL SKIN DECONTAMINATION SYSTEM.
OXYGEN, MEDICAL, FIELD GENERATION/DISTRIBUTION.
RESUSCITATIVE FLUID PRODUCTION SYSTEM.
PYRIDOSTIGMINE PRETREATMENT SYSTEM.

...FUNCTIONS/EQUIPMENT/FACILITIES

INSTALLATION: MEDICAL RESEARCH AND DEVELOPMENT COMMAND

FT. DETRICK, MD

CDR: MG PHILIP K. RUSSELL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	12.687	26.485
TOTAL PROCUREMENT	0.000	10.000
TOTAL O&M	0.005	0.901
TOTAL OTHER	4.683	4.774
TOTAL ANNUAL LAB	17.375	42.160
TOTAL INHOUSE	8.095	7.614
TOTAL INHOUSE RDTE	8.090	6.773
ANNUAL OPERATING COST	8.095	7.614

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	60	18	53	7
CIVILIAN	181	4	24	157
TOTAL	241	22	77	164

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
0	0.000	71.136	0.000	71.136	1.800		3.800

...MISSION

ADMINISTRATION AND COORDINATION OF THE ARMY MEDICAL RDTE, A PROGRAM.
PROGRAM LIMITED TO UNIQUE MILITARY PROBLEMS WITHIN THE UNITED STATES
AND OCONUS.

...CURRENT IMPORTANT PROGRAMS

CARE OF THE WOUNDED.
PREVENTION AND CONTROL OF INFECTIOUS DISEASES.
ENHANCEMENT OF MILITARY PERFORMANCE.
PROTECTION AGAINST MILITARY ENVIRONMENTAL HAZARDS.
DEVELOPMENT OF MEDICAL DEFENSE AGAINST CHEMICAL & BIOLOGICAL WARFARE.

...FUNCTIONS/EQUIPMENT/FACILITIES

SERVES AS AN ADMINISTRATIVE HEADQUARTERS FOR THE ARMY MEDICAL DEPART-
MENTS

INSTALLATION: MEDICAL RESEARCH INST OF CHEMICAL DEFENSE

ABERDEEN PVG GRD, MD

CDR: COL MICHAEL A. DUNN

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	32.144	23.311
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.101	0.317
TOTAL OTHER	3.929	4.044
TOTAL ANNUAL LAB	36.174	27.672
TOTAL INHOUSE	15.738	15.122
TOTAL INHOUSE RDTE	15.631	14.801
ANNUAL OPERATING COST	6.218	7.335

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	85	26	40	45
CIVILIAN	184	23	69	115
TOTAL	269	49	109	160

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)					
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
31	36.246	25.945	99.029	161.220	9.384	18.213	

...MISSION

FUNDAMENTAL RES ON MECHANISMS OF ACTION (CW AGENTS, ANTIDOTES & PRETREAT DEVELOPMENT OF PRETREATMENT, ANTIDOTE DRUGS & DECONTAMINANTS AGAINST CW AGENTS. DEVELOP & EVALUATE PREVENTION, RESUSCITATION, TREATMENT & MGMT METHODS FOR CHEMICAL CASUALTIES AND ASSIST IN THEIR IMPLEMENTATION.

...CURRENT IMPORTANT PROGRAMS

BASIC RESEARCH ON CHEMICAL AGENT & MEDICAL COUNTERMEASURES.
BIOMEDICAL EFFECTS OF CW AGENT & CANDIDATE MEDICAL COUNTERMEASURES.
SAFETY & EFFICACY OF CANDIDATE PREVENTATIVE COUNTERMEASURES.
ANALYTICAL TECHNOLOGY FOR MEDICAL COUNTERMEASURES.
ADVANCED STUDIES OF CASUALTY CARE TECHNOLOGY.

...FUNCTIONS/EQUIPMENT/FACILITIES

MODERN 7,000 SF ANIMAL HOLDING FACILITY & CHEMICAL SURETY AREA.
TECH LIBRARY HAS 6,000 BOOKS, 1,000 JOURNAL TITLES, AND MANY DATA BASES.
VIDEO PRODUCTION FACILITY & STATE-OF-THE-ART COMPUTER FACILITY.
MEDICAL MAINTENANCE FACILITY LABORATORY SUPPLY FACILITY.
RADIOISOTOPE, CHEMICAL ANTIDOTE & BIOCHEM ANALYSIS & QUALITY ASSURANCE.
BEHAVIORAL TESTING LABORATORY & DRUG SCREENING LABORATORY.
LIQUID, GAS, COLUMN & AFFINITY CHROMATOGRAPHY, QUANT IMAGE ENHANCE/ANAL.
ELECTROPHORESIS, SPECTROSCOPY, FLUOROMETRY & SPECTROPOLARIMETRY.
GC MASS SPECTROMETRY, ELECTRON SPIN RESONANCE & PEPTIDE SYNTHESIS.
AMINO ACID ANALYSIS & PEPTIDE SEQUENCING, MONOCLONAL HAPTEN ANTIBODIES.
PHYSIOLOGY, PHARMACOLOGY, NEUROPHARMACOLOGY, & TISSUE CULTURE LABS.
ELECTRON, SCANNING & X-RAY MICROSCOPY, CELL CLONING, RECEPTOR ANALYSIS.

INSTALLATION: MEDICAL RESEARCH INST OF INFECTIOUS DISEASES FT. DETRICK, MD

CDR: COL DAVID L. HUXSOLL

DEP FOR SCIENCE: DR. M. A. CHRIGOS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	47.061	44.769
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.471	0.354
TOTAL OTHER	9.967	11.241
TOTAL ANNUAL LAB	57.499	56.364
TOTAL INHOUSE	24.675	25.514
TOTAL INHOUSE RDTE	24.187	24.168
ANNUAL OPERATING COST	4.691	2.817

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	293	52	102	191
CIVILIAN	262	46	113	149
TOTAL	555	98	215	340

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP	
	LAB	ADMIN	OTHER				
388	104.136	26.618	205.841	336.595	21.103	25.139	

...MISSION

DEVELOP STRATEGIES, PRODUCTS, INFORMATION, PROCEDURES AND TRAINING FOR MEDICAL DEFENSE AGAINST BIOLOGICAL WARFARE AGENTS AND NATURALLY OCCURRING INFECTIOUS AGENTS OF MILITARY IMPORTANCE THAT REQUIRE SPECIAL CONTAINMENT.

...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT OF BROADLY CROSS-PROTECTIVE VACCINES AGAINST ALPHAVIRUS INFECTIONS. COMPLETED FIELD TRAILS; DEMONSTRATED EFFICACY OF ANTIVIRAL DRUG AGAINST EPIDEMIC HEMORRHAGIC FEVER. REMOTE-SENSING SATELLITE IMAGERY FOR PREDICTING INCREASED RISK OF RIFT VALLEY FEVER VIRAL INFECTIONS. PROTECTION FROM LETHAL CHALLENGE OF VIRULENT B ANTHRACIS.

...FUNCTIONS/EQUIPMENT/FACILITIES

MEDICAL RESEARCH CONDUCTED IN TWO BUILDINGS PROVIDING 307,000 SF AND CONTAINING 23 MODERN LAB SUITES WITH EMPHASIS ON BIOSAFETY LEVEL 3 AND 4 (BL-3 & 4). CONTAINMENT BL-4 OPERATIONS CONDUCTED IN POSITIVE PRESSURE PERSONNEL SUITS AND/OR CLASS III MICROBIOLOGICAL SAFETY CABINETS. BL-4 LABS ARE UNIQUE RESOURCE IN WORLD FOR SAFE STUDY OF HIGH HAZARD DISEASE AGENTS WITH RESEARCH RESULTS PUBLISHED IN OPEN SCIENCE LITERATURE. SPECIAL 16-BED EXPERIMENTAL WARD FOR VACCINE AND OTHER STUDIES IN VOLUNTEERS. BL-4 CONTAINMENT WARD, BL-4 CLINICAL LAB AND BL-4 ISOLATION TRANSPORT SYSTEM PROVIDE STATE-OF-THE-ART MEDICAL TREATMENT AND DIAGNOSIS FOR MOST HAZARDOUS DISEASES KNOWN. OTHER UNIQUE FEATURES INCLUDE AEROSOL ASSESSMENT, CELL CULTURE, ELECTRON MICROSCOPES, MASS SPECTROMETRIC FACILITY, DNA TECHNOLOGY, HYBRIDOMA LAB, COAGULATION LAB.

INSTALLATION: MISSILE RESEARCH, DEV, AND ENGR CNTR

REDSTONE ARSENAL, AL

CDR: MG AUGUST CIANCIOLO

TECH DIRECTOR: DR. WILLIAM C. McCORKLE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	289.662	290.620
TOTAL PROCUREMENT	54.500	81.280
TOTAL O&M	42.012	35.191
TOTAL OTHER	3.947	2.677
TOTAL ANNUAL LAB	390.121	409.768
TOTAL INHOUSE	105.270	102.796
TOTAL INHOUSE RDTE	68.056	56.444
ANNUAL OPERATING COST	29.495	28.362

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	42	0	20	22
CIVILIAN	1255	55	743	512
TOTAL	1297	55	763	534

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
15000	867.000	322.000	210.000	1399.000	240.000	302.000	

...MISSION

PROVIDE SUPPORT FOR PROJECT MANAGED SYSTEMS; MANAGE AND CONDUCT RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT FOR MISSILES, ROCKETS, DIRECTED ENERGY WEAPONS AND UNMANNED AERIAL VEHICLES; PROVIDE TECHNICAL SOLUTIONS TO ARMY'S CLOSE COMBAT, FIRE SUPPORT, AND AIR DEFENSE SYSTEM NEEDS AND DEVELOP TECHNOLOGY FOR FUTURE SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

PRECISION DEEP ATTACK MISSILE SYSTEM (PDAMS)
HYPERVELOCITY MISSILE (HVM)
LOW COST EXPENDABLE TURBOJET ENGINES
ADVANCED KINETIC ENERGY MISSILE (ADKEM)
FIBER OPTIC GUIDED MISSILE (FOG-M)

...FUNCTIONS/EQUIPMENT/FACILITIES

THE MISSILE RDTE CENTER IS EQUIPPED TO STUDY PROBLEMS IN PROPULSION, AERODYNAMICS, GUIDANCE AND CONTROL, STRUCTURES, ADVANCED SENSORS, AND MISSILE SYSTEM SIMULATION. THE MAJOR FACILITY IS MCMORROW LABORATORY WHICH HOUSES THE MAJORITY OF THE CENTER. SOME UNIQUE FACILITIES ARE: ADVANCED SIMULATION CENTER; A COMPUTER COMPLEX SURROUNDED PERIPHERALLY BY THREE (3) ENVIRONMENTAL EFFECTS SIMULATORS; MISSILE COMPUTER SOFTWARE/HARDWARE CENTER; LIGHTING TEST FACILITY; ARMY MISSILE OPTICAL RANGE, THE CENTER MAINTAINS AND OPERATES SEVEN MAJOR TEST AREAS WHICH ENCOMPASS FLIGHT STATIC, ENVIRONMENTAL, AND FUNCTIONAL TESTING. THE CENTER ALSO UTILIZES STATE-OF-THE-ART FACILITIES AND EQUIPMENT SUCH AS ARMY LEAD CENTER IN GUIDANCE AND CONTROL/TERMINAL HOMING TECHNOLOGY. ACTS AS AMC LEAD FOR SMART MUNITIONS. PROPULSION SMOKE CHARACTERIZATION FAC.

INSTALLATION: NATICK RESEARCH, DEVELOPMENT AND ENGR CNTR NATICK, MASSACHUSETTS

DIR: COL CLINTON A. HODDER

TECH DIRECTOR: DR. ROBERT W. LEWIS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	55.103	65.605
TOTAL PROCUREMENT	8.426	8.200
TOTAL O&M	16.114	11.732
TOTAL OTHER	6.374	6.334
TOTAL ANNUAL LAB	86.017	91.871
TOTAL INHOUSE	55.314	52.647
TOTAL INHOUSE RDTE	39.538	39.942
ANNUAL OPERATING COST	12.686	14.200

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	96	7	53	43
CIVILIAN	905	63	440	465
TOTAL	1001	70	493	508

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL	PROP	EQUIP
	LAB	ADMIN	OTHER				
174	415.891	58.018	337.859	811.768	29.901		2.379

...MISSION

PROVIDE R&D & ENGR REQUIRED FOR TECH SUPPORT OF ASSIGNED FIELD MIL EQUIPMENT & FOR APPLICATION OF TECHNOLOGIES FOR FIELD ORG EQUIPMENT, SUSTAINMENT (FOOD, FIELD FEEDING SYSTEMS, & AIR DROP SYSTEMS), AND FOR PROTECTION OF PERSONNEL & EQUIPMENT (PROTECTIVE CLOTHING, SHELTERS, ETC.)

...CURRENT IMPORTANT PROGRAMS

INTEGRATED PROTECTION FOR SOLDIER FROM MULTI THREATS INCL C-B, DEW, ETC.
LIGHTENING THE SOLDIER'S LOAD/IMPROVED SOLDIER PERFORMANCE
COMBAT FIELD FEEDING SYSTEMS
HARDENED SHELTERS; CHEM PROTECTIVE TENTAGE; ADV FIELD ORG EQUIP SYSTEMS
ADVANCED PERSONNEL & CARGO AIRDROP SYSTEMS

...FUNCTIONS/EQUIPMENT/FACILITIES

NUCLEAR MAGNETIC RESONANCE SPECTROMETER FOR MULTINUCLEI & SOLIDS; HIGH RESOLUTION MASS SPECTROMETER; PEPTIDE SYNTHESIZER TO PRODUCE PROTEINS; SCANNING TRANSMISSION ELECTRON MICROSCOPE; BACTERIOLOGY LAB EQUIPMENT; LASER LAB FOR EVALUATION OF HIGH ENERGY LASERS ON TEXTILES; DYEING & FINISHING LAB; CLIMATIC CHAMBERS WITH RANGE OF -57C TO +74C & WIND/RAIN CAPABILITY; ENVIRONMENTAL CHAMBER; ENHANCED LABORATORY ROBOTIC SYSTEM; TERRAIN FACILITY TO CONDUCT IMAGING STUDIES FOR COUNTERSURVEILLANCE; MOBILE INSTRUMENTED VEHICLE FOR FIELD TESTING OF AIRDROP SYSTEMS; AIRCRAFT ROLLER CONVEYOR TEST FACILITY; DROP TEST FACILITY; SENSORY EVALUATION LAB; COMPUTER AIDED DESIGN SYSTEMS; AUTOMATED PROCESS/CONTROL SYSTEM FOR FOOD PROCESSING; FOOD PROCESSING LAB; FOOD SYSTEM EQUIPMENT LAB; PRIME 2250 COMPUTER; IBM 4381 & 4341; SPERRY 5000 NETWORK CONTROLLER.

INSTALLATION: RSCH INST FOR BEHAVIORAL & SOCIAL SCIENCES ALEXANDRIA, VA

CDR: COL JON W. BLADES

TECH DIRECTOR: EDGAR M. JOHNSON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	63.459	61.350
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	4.720	2.150
TOTAL OTHER	1.374	2.218
TOTAL ANNUAL LAB	69.553	65.718
TOTAL INHOUSE	23.690	22.761
TOTAL INHOUSE RDTE	23.343	22.700
ANNUAL OPERATING COST	11.617	11.393

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	16	2	18	0
CIVILIAN	313	161	233	80
TOTAL	329	163	251	78

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
0	55.155	14.000	6.200	75.355	0.724		8.961

...MISSION

COOPERATIVE LEARNING METHODOLOGY FOR COST-EFFECTIVE SCHOOL TRAINING TO MAXIMIZE COMBAT EFFECTIVENESS THROUGH RESEARCH IN THE ACQUISITION DEVELOPMENT TRAINING AND UTILIZATION OF SOLDIERS IN MILITARY SYSTEMS

...CURRENT IMPORTANT PROGRAMS

MANPRINT PROCUREMENT HANDBOOKS FOR RFP DEVELOPMENT. DEVELOPMENT OF ASVAB APTITUDE AREA COMPOSITES TO ENHANCE SOLDIER PERFORMANCE. TRIAL USE OF NEW GUNNERY APTITUDE SCREEN TO SELECT TOW BRADLEY ARMOR AD AND FIELD ARTILLERY GUNNERS. NEAR-INFRARED PROJECTION SYSTEM FOR NIGHT VISION GOOGLE TRAINING.

...FUNCTIONS/EQUIPMENT/FACILITIES

THE PRINCIPLE ARMY AGENCY CONDUCTING SOLDIER-RELATED RESEARCH AND DEVELOPMENT CONSISTS OF THREE RESEARCH LABORATORIES AND BASIC RESEARCH OFFICE. THE LABORATORIES ARE COMPRISED OF TECHNICAL AREAS. SELECTION AND CLASSIFICATION; SPECIAL SELECTION; PERSONNEL UTILIZATION; MANPOWER AND PERSONNEL POLICY; EXECUTIVE DEVELOPMENT; MANPRINT COORDINATION; MANNED SYSTEMS; TECHNOLOGIES FOR SKILL ACQUISITION AND RETENTION AUTOMATED INSTRUCTIONAL SYSTEMS; LEADERSHIP AND MOTIVATION AND ALSO FIELD UNITS AND SCIENTIFIC COORDINATION OFFICES LOCATED AT PRESIDIO OF MONTEREY; FT BENNING; FT KNOX; FT RUCKER; FT HOOD; FT LEAVENWORTH; ORLANDO; FT HUACHUCA; OTEA; AVSCOM; AND BOISE. IN-HOUSE EXPERIMENTAL FACILITIES LABORATORY AND COMPUTER PERMIT REALTIME EXPERIMENTATION GAMING AND SIMULATION.

INSTALLATION: RSRCH INST OF ENVIRONMENTAL MEDICINE

NATICK, MA

CDR: COL DAVID D. SCHNAKENBERG

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	7.111	14.659
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.087	0.015
TOTAL OTHER	2.958	3.097
TOTAL ANNUAL LAB	10.156	17.771
TOTAL INHOUSE	6.717	9.133
TOTAL INHOUSE RDTE	6.619	9.115
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	72	15	50	22
CIVILIAN	81	28	49	32
TOTAL	153	43	99	54

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
1	46.621	6.163	24.790	77.574	4.084	10.092

...MISSION

CONDUCT RESEARCH TO DETERMINE EFFECTS OF HEAT, COLD, HIGH ALTITUDE, NUTRITION AND WORK UPON SOLDIER'S LIFE PROCESS, PERFORMANCE & HEALTH; PHYSIOLOGICAL ASPECTS & HEALTH EFFECTS OF ARMY PHYSICAL FITNESS TRAINING; AND PROVIDE TECHNICAL/CONSULTANT SERVICES TO TOTAL ARMY.

...CURRENT IMPORTANT PROGRAMS

COMPLETED A SERIES OF STUDIES THAT HAVE DEMONSTRATED BENEFICIAL ERGOGENIC EFFECT OF RED BLOOD CELL REINFUSION; PHYSOSTIGMINE & DIAZEPAM TREATMENTS EFFECTIVE IN REDUCING ADVERSE EFFECTS OF THE CHEMICAL ANTI-DOTE, ATROPINE, ON EXERCISE ENDURANCE & HEAT TOLERANCE; LIGHT WEIGHT RATION CAN BE FED WITH MINIMAL DECREMENTS IN AEROBIC PERFORMANCE, ETC.

...FUNCTIONS/EQUIPMENT/FACILITIES

THE MAJOR EQUIPMENT AND FACILITY CAPABILITIES OF THE LABORATORY INCLUDE BUT ARE NOT LIMITED TO, TWO LARGE ALTITUDE CHAMBERS, 14 SMALL CLIMACTIC CHAMBERS, AAALAC ACCREDITED ANIMAL CARE FACILITIES, ELECTRON MICROSCOPE, UNDERWATER RESEARCH POOL, COPPER MANIKINS AND DIVERSE PHARMACOLOGICAL AND PHYSIOLOGICAL MEASURING EQUIPMENT. THE INSTITUTE MAINTAINS A FIELD FACILITY IN THE SUMMIT OF PIKES PEAK, CO.

INSTALLATION: TANK AUTOMOTIVE RD&E CENTER

WARREN, MI

DEP DIR: DR. G. ORLICKI

TECH DIRECTOR: W. WHEELOCK

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	98.259	79.431
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	20.661	16.529
TOTAL OTHER	1.275	1.275
TOTAL ANNUAL LAB	120.195	97.235
TOTAL INHOUSE	35.152	28.379
TOTAL INHOUSE RDTE	21.122	17.154
ANNUAL OPERATING COST	6.695	6.669

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	28	0	19	9
CIVILIAN	769	18	413	356
TOTAL	797	18	432	365

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
11	246.562	123.756	125.274	495.592	256.678	163.516

...MISSION

PLAN,MANAGE,& CONDUCT RESEARCH EXP/ADV DEVELOPMENT & OVERALL SYS INT FOR GROUND VEHICLES; PROVIDE ENGR SPT FOR FIELDIED SYSTEMS & PROC OF NEW EQUIPMENT; MANAGE CONFIG & TECH DATA FOR TANK-AUTO EQUIPMENT; PROVIDE SCIENTIFIC & ENGR SPT TO TACOM PEO'S & AMC/DOD ELEMENTS.

...CURRENT IMPORTANT PROGRAMS

ARMORED COMBAT VEH DEVELOPMENT & VEHICLE ELECTRONICS (VETRONICS) INTEGRATION

ADVANCED INTEGRATED PROPULSION SYSTEM (AIPS)

ADVANCED TECHNOLOGY TRANSITION DEMONSTRATOR (ATTD)

COMBAT VEH SERVICEABILITY AND ARMOR INTEGRATION

...FUNCTIONS/EQUIPMENT/FACILITIES

TACOM HAS THE FOLLOWING UNIQUE ARMY CAPABILITIES: PERFORM LAB DEVEL AND TESTING OF TRACK, SUSPENSION & COMPLETE PROPULSION SYSTEMS TO INCLUDE ENVIRONMENTAL HEAT TESTING; CONCEPTUALIZE, DESIGN & FABRICATE COMPONENTS OR COMPLETE VEH INHOUSE; EFFECTIVELY INTEGRATE THE VEHICLE ELECTRONICS & ELECTRONIC SUBSYSTEMS WHILE OPTIMIZING THE SOLDIER/MACH INTERFACE; ADAPT & INTEGRATE SURVIVABILITY TECH BEFORE VEH CONCEPT DESIGN & INTEGRATE THEM WITH THE ARMOR ARRAYS PROVIDED BY ARMY LABS; CONDUCT PHYSICAL SIMULATIONS ON A FOUR DEGREE OF FREEDOM MOTION BASED SIMULATOR TO DETERMINE COMPONENTS INTERACTION & MAN/MACH INTERFACE; INTEGRATE ALL OTHER AMC AND CONTRACTOR DEVELOPED TECHNOLOGIES INTO CONCEPT DESIGNS FOR FUTURE COMBAT AND TACTICAL VEHICLE SYSTEMS

INSTALLATION: TRADOC TEST AND EXPERIMENTATION COMMAND

FT. HOOD, TX

DIR: MG WILLIAM C. PAGE JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	35.455	46.415
TOTAL PROCUREMENT	3.151	4.252
TOTAL O&M	17.005	18.894
TOTAL OTHER	30.108	37.163
TOTAL ANNUAL LAB	85.719	106.724
TOTAL INHOUSE	42.062	54.507
TOTAL INHOUSE RDTE	35.455	46.415
ANNUAL OPERATING COST	28.141	27.695

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	663	0	183	480
CIVILIAN	552	1	220	332
TOTAL	1215	1	403	812

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
22	19.900	41.000	0.000	60.900	6.200	2.240	

...MISSION

EXECUTE FORCE DEV AND FOLLOW-ON OPERATIONAL TESTS. CONDUCT FIELD EXPERIMENTATION EARLY USER TESTS, INITIAL OPERATIONAL TESTS, AND CONCEPT EVALUATIONS. CONDUCT FIELD VALIDATION OF NEW ORGANIZATIONS AND OPERATIONAL CONCEPTS. DEVELOP AND PROCURE INSTRUMENTATION.

...CURRENT IMPORTANT PROGRAMS

ANTI-ARMOR
ARTILLERY EFFECTS
LIGHT DIVISION CONCEPT
CLOSE AIR
URBAN WARFARE

...FUNCTIONS/EQUIPMENT/FACILITIES

POSITION LOCATION, HIGH AGILITY MODULAR INTEGRATED TGT, VIDEO, DATA ACQUISITION & REDUCTION, THERMAL IMAGING, FIBER OPTICS & VIDEO MULTIPLEXER/DEMULTIPLEXER; EQ: RANGE TIMING, M-WAVE, ENVIRONMENTAL MEAS & SURVEY

INSTALLATION: TROPIC TEST CENTER

FT. CLAYTON, PANAMA

CDR: COL JOHN M. HARNISCH

TECH DIRECTOR: MR. B. R. DAVIS

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	3.599	3.171
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.165	1.923
TOTAL ANNUAL LAB	5.764	5.094
TOTAL INHOUSE	5.764	5.094
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	0.400	0.100

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	9	0	16	53
CIVILIAN	62	2	36	26
TOTAL	131	2	52	79

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
2624	18.000 35.925 83.756 137.681	2.378 4.988

...MISSION

PLAN, CONDUCT AND REPORT ON TROPIC ENVIRONMENTAL PHASES OF DEVELOPMENT TEST II AND OTHER DEVELOPMENTAL TYPE TEST. PROVIDE ADVICE AND GUIDANCE ON TESTS AND EVALUATION MATTERS TO MATERIEL DEVELOPERS, MATERIEL PRODUCERS, OTHER SERVICES AND PRIVATE INDUSTRY.

...CURRENT IMPORTANT PROGRAMS

REMOTE SENSING CHEMICAL ALARM (RSCAL) XM21
CATAPULT LAUNCHED FUEL-AIR EXPLOSIVE (CATFAE) SYSTEM
FIVE SOLDIER CREW TENT. LINEAR SHAPED CHARGE
LIGHTWEIGHT CHEMICAL/BIOLOGICAL PROTECTIVE GARMENT (LPG)
UNATTENDED GROUND SENSORS (UGS) OF MINI INTRUSION DETECTION SYSTEM

...FUNCTIONS/EQUIPMENT/FACILITIES

TEST FACILITIES AND LABORATORIES WITH INSTRUMENTS AND EQUIPMENT FOR CONDUCTING TROPICAL TESTS OF DOD MATERIEL IN THE NATURAL ENVIRONMENT TO INCLUDE ELECTRONICS, HUMAN FACTORS, CHEMICAL, MICROBIOLOGICAL, MATERIEL, SOILS, AND DATA ANALYSIS LABORATORIES. OTHER TEST RESOURCES CONSIST OF FIRING RANGES, NATURAL TERRAIN MOBILITY COURSES, AMMO TEST STORAGE AND FUNCTIONING AREAS, JUNGLE, OPEN, AND COASTAL MATERIAL EXPOSURE SITES, JUNGLE RADIO RANGING SITES, POL TANK FARM, MANPACK PORTABILITY COURSE, AND TEST SITES REPRESENTING A VARIETY OF TROPIC MICROENVIRONMENTS INCLUDING BROADLEAF EVERGREEN TREES, SEMIDECIDUOUS TREES, MARSHLAND, GRASSLAND, CORAL REEFS, FLAT AND HILLY TERRAIN.

INSTALLATION: VULNERABILITY ASSESSMENT LABORATORY

WHITE SNDS MSL RNG, NM

CDR: COL EDWARD J. BRADY

DEPUTY DIRECTOR: GILBERT R. APODACA

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	31.049	46.456
TOTAL PROCUREMENT	2.394	3.451
TOTAL O&M	1.108	1.420
TOTAL OTHER	0.856	1.849
TOTAL ANNUAL LAB	35.407	53.176
TOTAL INHOUSE	12.059	12.750
TOTAL INHOUSE RDTE	10.829	10.942
ANNUAL OPERATING COST	5.787	6.015

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	60	0	5	55
CIVILIAN	196	4	126	70
TOTAL	256	4	131	125

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
1316	85.030	38.516	77.654	201.200	5.884	66.000	

...MISSION

CONDUCT INDEPENDENT ELECTRONIC WARFARE VULNERABILITY ASSESSMENTS OF ARMY WEAPON AND COMMUNICATIONS-ELECTRONICS SYSTEMS. REDUCE ELECTRONIC WARFARE VULNERABILITIES THROUGH THE DEVELOPMENT OF ADVANCED COUNTER-COUNTERMEASURES TECHNIQUES AND RECOMMENDATIONS TO ARMY PROJECT MANAGERS.

...CURRENT IMPORTANT PROGRAMS

PROVIDED EW ENVIRONMENT FOR SADARM FIELD TEST. PROVIDED ECM ENVIRONMENT AND ANALYSIS WHICH LED TO THE FAADS-LOS-F-H SELECTION. ASSESSED PATRIOT ECCM PERFORMANCE IN HAWK INTEROPERABILITY, ATM, AND SOJC PROGRAMS. GENERATED A MOBILE SUBSCRIBER EQUIPMENT ECCM PRODUCT IMPROVEMENT PROGRAM DEVEL UHF MULTICHANNEL STEERABLE NULL ANTENNA PROCESSOR MODEL FOR MSE.

...FUNCTIONS/EQUIPMENT/FACILITIES

THE ELECTRO-OPTICAL COUNTERMEASURES SIMULATION FACILITY PERFORMS REAL-TIME HARDWARE IN THE LOOP MISSILE FLIGHT SIMULATIONS FOR EVALUATING MISSILE PERFORMANCE IN A COUNTERMEASURES ENVIRONMENT. THE ARMY AIRBORNE ELECTRONIC WARFARE LABORATORY CONSISTS OF A USAF NKC 135A AIRCRAFT WITH ON BOARD JAMMERS/CHAFF/FLARES USED TO CREATE A COUNTERMEASURES ENVIRONMENT FOR VULNERABILITY ASSESSMENT OF DOD SYSTEMS. THE SIGNATURE MEASUREMENTS AND DATA REDUCTION FACILITY CONDUCTS INFRARED SPECTRAL AND ULTRAVIOLET/INFRARED IMAGING MEASUREMENTS IN SUPPORT OF ELECTRONIC WARFARE PROGRAMS. THE SPECIAL ELECTROMAGNETIC INTERFERENCE FACILITY ASSESSES THE EFFECTS OF ELECTROMAGNETIC INTERFERENCE ON MILITARY SYSTEMS. THE DYNAMIC ANALYSIS LABORATORY USES HARDWARE IN THE LOOP TO ASSESS EFFECTS OF COUNTERMEASURES ON LASER GUIDED AND INFRARED SMART MUNITIONS.

INSTALLATION: WALTER REED ARMY INSTITUTE OF RESEARCH

WASHINGTON, DC

CDR: COL C. FRED TYNER

DEPUTY:

COL MICHAEL G. GROVES

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	48.769	66.183
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	5.775	5.935
TOTAL OTHER	21.487	21.996
TOTAL ANNUAL LAB	76.031	94.114
TOTAL INHOUSE	52.812	42.680
TOTAL INHOUSE RDTE	46.849	36.547
ANNUAL OPERATING COST	3.555	3.754

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	433	98	304	129
CIVILIAN	547	68	232	315
TOTAL	980	166	536	444

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
203	383.274	61.600	0.000	444.874	10.080	28.053

...MISSION

MISSION IS TO PERFORM RESEARCH IN THE PREVENTION OF SOLDIER DISABILITY & RETURN TO DUTY OF SOLDIERS WHO DO BECOME CASUALTIES. THIS IS DONE BY THE DEVELOPMENT OF MEDICAL MATERIAL & DOCTRINE TO PROTECT AGAINST THREATS FROM THE NATURAL ENVIRONMENT, MILITARY WEAPONS, & OPS STRESS.

...CURRENT IMPORTANT PROGRAMS

DEVELOP DRUGS & VACCINES TO PROTECT AGAINST INFECTIOUS DISEASES THREATS.
DEVELOP MEANS FOR PREVENTION OF OPERATIONAL STRESS IN COMBAT ENVIRONMT.
DEVELOP METHODS TO PREVENT SEPSIS & SHOCK AFTER TRAUMATIC INJURY.
DEVELOP STRATEGIES FOR PROTECTING SOLDIERS FROM CW AND BW THREATS.
DEVELOP METHODS OF PREVENTING INJURIES FROM BLAST & DIRECTED ENERGY.

...FUNCTIONS/EQUIPMENT/FACILITIES

COMPLETE ANALYTICAL CHEMISTRY CAPABILITY; DRUG DEVELOPMENT FROM COMPUTER AIDED DESIGN AND SYNTHESIS TO FIELD TESTING; VACCINE DEV FROM BASIC RESEARCH THROUGH PRODUCTION, TESTING & LICENSING; THOROUGH PATHOLOGICAL EVALUATION TO INCLUDE TRANSMISSION AND SCANNING ELECTRON MICROSCOPY STUDIES; INFECTIOUS DISEASE DIAGNOSIS TO INCLUDE ISOLATION OF AGENTS AND SEROLOGICAL DIAGNOSIS; PERFORM COMPREHENSIVE HUMAN BEHAVIORAL RESEARCH STUDIES IN THE LABORATORY AND IN THE FIELD; EVALUATE HEALTH HAZARDS FROM BLAST AND TOXIC GASES AND HIGH-POWER MICROWAVES; PERFORM COMPLETE EPIDEMIOLOGY ON MILITARY MEDICAL THREATS; TESTING OF DRUGS, VACCINES AND MEDICAL DOCTRINE IN OVERSEAS FIELD LOCATIONS IN KOREA, BRAZIL, GERMANY, THAILAND AND KENYA.

INSTALLATION: WHITE SANDS MISSILE RANGE

WHITE SANDS M R, NM

CDR: MG THOMAS J.P. JONES, USA

TECH DIRECTOR: MR. JOHN A. LOCKERD

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	189.841	193.556
TOTAL PROCUREMENT	24.352	26.011
TOTAL O&M	10.605	10.600
TOTAL OTHER	23.844	24.395
TOTAL ANNUAL LAB	248.642	254.562
TOTAL INHOUSE	109.321	108.868
TOTAL INHOUSE RDTE	86.278	87.094
ANNUAL OPERATING COST	0.485	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	642	18	638	4
CIVILIAN	2371	68	1158	1213
TOTAL	3013	86	1796	1217

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1795861	1454.443	679.560	3048.239	5182.242	248.798	276.048

...MISSION

TO PROVIDE AND OPERATE A NATIONAL TEST RANGE, THE HIGH ENERGY LASER SYS
TEST FACILITY AND ARMY TEST FACILITIES; TO TEST AND EVALUATE ARMY
MATERIEL AND TO OPERATE AND MAINTAIN THE INSTALLATION.

...CURRENT IMPORTANT PROGRAMS

ARMY-PATRIOT, FAADS, MLRS, STINGER, HAWK, AND TACMS
AIR FORCE-AMRAAM, AIM, AND F15 TACTICAL OPERATIONS AND TRAINING
NAVY-RAM, SM, ASROC, 16" GUN, MIRACL & SLBD, CLANCE
NASA-SHUTTLE TRAINING/OPERATIONS AND TRACKING DATA RELAY SATELLITE SYS
OTHER-SD10, DNA, DOE, AND OTHER FOREIGN GOVT AND PRIVATE INDUSTRY TESTS

...FUNCTIONS/EQUIPMENT/FACILITIES

WSMR, AN ALL-OVERLAND TEST RANGE, PROVIDES TREMENDOUS LAND AND AIR SPACE
FOR MISSILE SYSTEM/SUBSYSTEM TESTING. THE RANGE PROVIDES INTERNAL AND
EXTERNAL MEASUREMENT DATA UTILIZING SECURE TELEMETRY AND RADAR, LASER
TRACKING, INTERFEROMETER, OPTICAL AND OTHER INSTRUMENTATION SYSTEMS.
THESE SYSTEMS, THE LAUNCH COMPLEXES, CONTROL CENTERS AND DATA PROCESSING
AND DISPLAY FACILITIES ARE JOINED BY EXTENSIVE TIMING AND COMMUNICATIONS
SYSTEMS. OTHER CAPABILITIES INCLUDE: EXPERIMENTAL PAYLOAD AND MISSILE
COMPONENT RECOVERY; AIR AND GROUND, MULTIPLE TARGET CONTROL AND GEODETIC
SURVEYING. OTHER TEST FACILITIES INCLUDE: MICROWAVE AND AUTOMATED SYS-
TEMS; DYNAMIC AND CLIMATIC ENVIRONMENTS, CHEMICAL, METALLURGICAL, MICRO-
BIOLOGICAL, NUCLEAR AND ELECTRO-MAGNETIC EFFECTS; HAZARDOUS WARHEADS AN
EXPLOSIVES: BURRIS WELL OUTDOOR ELECTRO-OPTICAL LABORATORY AND HELSTF.

INSTALLATION: YUMA PROVING GROUND

YUMA, AZ

CDR: COL WILLIAM J. MILLER

TECH DIRECTOR: WILLIAM T. VOMOCIL

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	59.534	59.467
TOTAL PROCUREMENT	8.617	7.548
TOTAL O&M	4.274	4.554
TOTAL OTHER	9.813	10.143
TOTAL ANNUAL LAB	82.238	81.712
TOTAL INHOUSE	32.348	32.029
TOTAL INHOUSE RDTE	28.849	28.098
ANNUAL OPERATING COST	21.873	21.388

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	256	0	109	147
CIVILIAN	594	3	210	384
TOTAL	850	3	319	531

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
837803	1.144 90.323 1520.259 1611.726	75.322 144.076

...MISSION

PLAN, CONDUCT, SUPPORT DEVELOPMENT TEST OF AIR DELIVERY SYSTEMS, LONG RANGE TUBE ARTILLERY, AIRCRAFT ARMAMENT, DIRECT FIRE WEAPONS AND AUTOMOTIVE EQUIPMENT. PLAN, CONDUCT DESERT FIELD TESTS AND ENVIRONMENTAL SIMULATION. DEVELOP TEST INSTRUMENTATION AND METHODS.

...CURRENT IMPORTANT PROGRAMS

HOWITZER IMPROVEMENT PROGRAM
155 NUCLEAR PROJECTILE
AH-64A STINGER
M2-M3 BRADLEY
SEEK AND DESTROY ARMOR MUNITION

...FUNCTIONS/EQUIPMENT/FACILITIES

INSTRUMENTED OVERLAND 60KM ARTILLERY RANGE WITH SUPPORT FACILITIES.
20 X 30KM AIRCRAFT ARMAMENT RANGE AND AIR DELIVERY DROP ZONES SUPPORTED BY 6 LASER TRACKERS, POSITION LOCATING SYSTEM, IM, VIDEO CINETHEODOLITES VERSATILE TRACKING MOUNTS, AND VIDEO SCORING/EVENTS CONNECTED TO A REAL TIME DATA PROCESSING SYSTEM WITH 3 DISPLAY AND CONTROL CENTERS.
RESTRICTED USE AIRSPACE AREAS ALLOW SAFE CONDUCT OF CONCURRENT TESTS.
EIGHTEEN AUTOMOTIVE TEST COURSES FOR PERFORMANCE, MOBILITY & DURABILITY TESTS INCLUDING PAVED DYNAMOMETER COURSE WITH MOBILE DYNAMOMETERS AND SUPPORT SHOP PHYSICAL MEASUREMENT, TDT, X-RAY, PETROL AND CHEMICAL LABS. STATIONARY, MOVING VISUAL TARGETS AND THERMAL TARGET PANELS.
SCIENTIFIC COMPUTER CENTER WITH REAL-TIME AND BATCH DATA PROCESSING.
HARD SURFACE AIRFIELD WITH 5150 AND 6000FT RUNWAYS, MAINTENANCE FACILITY

INSTALLATION: AEROSPACE MEDICAL RESEARCH LABORATORY

PENSACOLA, FL.

CO: CAPT J.A. BRADY, MSC, USN

CHIEF SCIENTIST: DR. F.E. GUEDRY

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	5.633	5.287
TOTAL PROCUREMENT	0.165	0.277
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.843	1.919
TOTAL ANNUAL LAB	7.641	7.483
TOTAL INHOUSE	5.798	5.564
TOTAL INHOUSE RDTE	5.633	5.287
ANNUAL OPERATING COST	1.808	1.863

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	39	12	18	21
CIVILIAN	51	13	30	21
TOTAL	90	25	48	42

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
1	100.708	3.500	25.494	129.702		3.042	7.108

...MISSION

CONDUCT RESEARCH DEVELOPMENT TEST AND EVALUATION IN AVIATION MEDICINE AND ALLIED SCIENCES TO ENHANCE HEALTH SAFETY AND READINESS OF AVIATION PERSONNEL. CONDUCT RDT&E TO ASSESS AND IMPROVE HEALTH AND PHYSICAL TOLERANCES OF AVIATION PERSONNEL.

...CURRENT IMPORTANT PROGRAMS

VESTIBULAR TRA'DUCTION: MOTION PERCEPTION AND MOTION SICKNESS
EFFECTS OF BIOMEDICAL COUNTERMEASURES ON SUSTAINED OPERATIONS
EFFECTS OF PHARMACOLOGICAL COUNTERMEASURES ON SUSTAINED OPERATIONS
EFFECTS OF PHYSICAL FITNESS ON G-TOLERANCE
FIELD-TRIAL OF JOINT WORKING GROUP ON DRUG DEGRADATION (MILPERF)

...FUNCTIONS/EQUIPMENT/FACILITIES

SLOW ROTATION ROOM. CARIOLIS ACCELERATION PLATFORM. HUMAN DISORIENTATION DEVICE. STILL-WERNER CHAIR. OFF VERTICAL ROTATING CHAIR. ANECHOIC AND REVERBERANT CHAMBERS. AUTOMATED PULMONARY FUNCTION. TREADMILL. VECTOR AND ECHOCARDIOGRAPH. THERMOGRAPHIC IMAGING SYSTEM. 30 BINOCULAR EYE TRACKER AND VISUAL STIMULATOR ELECTRON MICROSCOPE. VIVARIUM WITH OPERATING SUITE. FIVE MOBILE FIELD LABS EQUIPPED TO COLLECT BIOMEDICAL AND COGNITIVE PERFORMANCE DATA. RADAR AND RADIO EMITTERS TO PRODUCE NON-IONIZING RADIATION FIELDS FOR HUMAN AND ANIMAL STUDIES. STANDARD LINEAR ENERGY DOUBLER (SLED) DEVICE FOR INCREASING POWER FOR MICROWAVE PULSES. PSYCHOLOGICAL TEST FACILITY. LASER FACILITY. PORTABLE CABINETS FOR MEASURING DEPOSITION MICROWAVE ENERGY IN MAN-SIZE MODELS.

INSTALLATION: AIR DEVELOPMENT CENTER

WARMINSTER, PA.

CO: CAPT C. J. WINTERS

TECH DIRECTOR: MR. G. C. DILWORTH, JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	230.384	260.520
TOTAL PROCUREMENT	66.068	72.618
TOTAL O&M	51.532	48.572
TOTAL OTHER	13.594	13.719
TOTAL ANNUAL LAB	361.578	395.429
TOTAL INHOUSE	192.000	187.000
TOTAL INHOUSE RDTE	137.856	134.271
ANNUAL OPERATING COST	59.968	64.633

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	235	3	66	169
CIVILIAN	2589	73	1539	1050
TOTAL	2824	76	1605	1219

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
921	868.278	102.379	449.099	1419.756	54.389	123.386

...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CENTER FOR NAVAL AIRCRAFT SYSTEMS
LESS AIRCRAFT-LAUNCHED WEAPONS SYSTEMS

...CURRENT IMPORTANT PROGRAMS

CV-ASW MODULE (CARRIER ASW)
VS/VP, F14/F18 PROGRAMS
LIGHT AIRBORNE MULTI-PURPOSE SYSTEMS (LAMPS)
TACAMO/ECX STRATEGIC COMMUNICATION AIRCRAFT
J-TIDS (JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM)

...FUNCTIONS/EQUIPMENT/FACILITIES

AIR WARFARE ANALYSIS, AIR ASW ANALYSIS, AIR COMBAT SYSTEMS ENGINEERING
AND INTEGRATION, AIR VEHICLES (STRUCTURES, MATERIALS, FLIGHT DYNAMICS,
PERFORMANCE, FLIGHT CONTROL), AIR VEHICLES-RELATED HUMAN FACTORS.
AIRCRAFT, SURFACE SHIP, AND SUBMARINE NAVIGATION SYSTEMS. AIRCRAFT CREW
EQUIPMENT AND LIFE SUPPORT. AEROSPACE MEDICINE AND AVIATION PHYSIOLOGY.
AIR COMMAND AND CONTROL SYSTEMS. AIR TARGETS (SUB-SCALE). DEVELOPMENT
AND INTEGRATION OF AIRBORNE SYSTEMS INCLUDING ELECTRONIC SURVEILLANCE
AND COUNTER MEASURES, COMMUNICATION, NAVIGATION INFORMATION,
ENVIRONMENTAL SENSING (ELECTROMAGNETIC/MAGNETIC, ACOUSTIC, ELECTRO-OPTIC
AND PHOTOGRAPHIC). LAB FACILITIES: CENTRAL COMPUTER FACILITY, VIBRATION,
THERMAL & PRESSURE FACILITIES. FLIGHT SIMULATION-CENTRIFUGE, SONOBUOY
TEST FACILITY, INERTIAL NAVIGATION FACILITY.

INSTALLATION: AIR PROPULSION CENTER

TRENTON, NJ.

CO: CAPT C. S. PARK

TECH DIRECTOR: W. W. WAGNER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	42.432	46.823
TOTAL PROCUREMENT	7.355	3.868
TOTAL O&M	0.547	3.015
TOTAL OTHER	5.509	6.257
TOTAL ANNUAL LAB	55.843	59.963
TOTAL INHOUSE	43.123	48.273
TOTAL INHOUSE RDTE	30.217	36.114
ANNUAL OPERATING COST	9.783	10.000

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	7	0	7	0
CIVILIAN	697	2	233	464
TOTAL	704	2	240	464

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
68	488.390	27.962	92.816	609.168	52.190	11.135

...MISSION

PROVIDE NAVAIR & FLEET COMPLETE TECHNICAL & ENGINEERING SUPPORT FOR AIR-BREATHING PROPULSION SYSTEMS, ACCESSORIES, COMPONENTS AND FUELS & LUBES. MANAGE AND PERFORM APPLIED R&D ON NEW PROPULSION SYSTEMS, EVALUATE NEW SYSTEMS. BY T&E ASSURE MISSION ACCOMPLISHMENT AND SOLVE FLEET PROBLEMS

...CURRENT IMPORTANT PROGRAMS

CRUISE MISSILE ENGINE (F107/F112) WARRANTY/DEVELOPMENT TESTING
F404-GE-400 SECOND PRODUCTION SOURCE TESTING
F404-GE-400D PRELIMINARY FLIGHT RATING TEST
F404/RM12 ALTITUDE QUALIFICATION TEST
F110-GE-400 PRODUCTION RELEASE TESTS

...FUNCTIONS/EQUIPMENT/FACILITIES

THREE LARGE ALTITUDE CELLS, TWO LARGE SEA LEVEL CELLS AND FOUR SMALL ALTITUDE CELLS PROVIDE ENVIRONMENTAL AND FLIGHT SIMULATION CAPABILITY OF SEA LEVEL TO 100000 FEET; MINUS 65 TO PLUS 350 DEGREES F; FLIGHT SPEEDS FROM ZERO TO MACH 3 TO TEST TURBOJET/FAN AND TURBOPROP/SHAFT ENGINES FIVE TEST ROOMS TO TEST STARTERS, ACCESSORIES AND AUXILIARY POWER UNITS TEN TEST ROOMS AND CHEMISTRY LAB USED FOR R&D ON FUELS, LUBES AND BEARINGS. SPECIAL TEST FACILITIES ARE ROTOR SPIN FACILITY, HELICOPTER TRANSMISSION TEST FACILITY, GYRO RIG AND ENGINE TURNTABLE. FACILITIES ARE USED FOR R&D ON ADVANCED FUELS AND LUBRICATING OILS, OIL-WETTED ENGINE COMPONENTS, AIR POLLUTION, LOW CYCLE FATIGUE, CONTAINMENT NOISE AND I/R PROGRAMS. NAPC QUALS OILS, MANAGES NAVY EXPLORATORY AND ADV DEVEL PRGMS, PROVIDES ADMN & TECH DIR TO SELECTED NAVAIR CONTRACTS.

INSTALLATION: AIR TEST CENTER

PATUXENT RIVER, MD.

CDR: RADM D. V. BOECKER

TECH DIRECTOR: MR. W. R. BURRIS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	151.564	165.261
TOTAL PROCUREMENT	71.543	71.491
TOTAL O&M	74.010	81.704
TOTAL OTHER	55.561	55.583
TOTAL ANNUAL LAB	352.678	374.039
TOTAL INHOUSE	193.477	201.458
TOTAL INHOUSE RDTE	92.454	100.809
ANNUAL OPERATING COST	75.087	78.451

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1731	3	376	1355
CIVILIAN	2565	13	1976	589
TOTAL	4296	16	2352	1944

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7093	1201.309	481.977	4472.431	6155.717	144.577	150.800

...MISSION

NAVY'S PRINCIPAL AIRCRAFT WEAPONS SYSTEM TEST AND EVALUATION ACTIVITY THROUGH ACTIVE TEST AND EVALUATION PARTICIPATION IN ALL PHASES OF THE WEAPONS SYSTEM LIFE CYCLE PROCESS. THIS INCLUDES FULL SCALE DEVELOPMENT; PRODUCTION AND FLEET SUPPT; AND FLEET IN-SERVICE ENGINEERING SUPPT.

...CURRENT IMPORTANT PROGRAMS

V-22
E-6A
E-2C HAWKEYE
F-14D
JTIDS

...FUNCTIONS/EQUIPMENT/FACILITIES

LARGE, INSTRUMENTED, RESTRICTED AIRSPACE PLUS DIRECT ACCESS TO INSTRUMENTED OFFSHORE WARNING AREAS/REAL-TIME RANGE AND AIRCRAFT TELEMETRY DATA PROCESSING AND DATA DISPLAY/SIMULATION CAPABILITIES FOR AIRBORNE WEAPONS SYSTEMS AND SOFTWARE/ENVIRONMENTAL SIMULATION CAPABILITIES FOR UNDERWATER ACOUSTICS; ELECTRONIC WARFARE AND ELECTROMAGNETIC VULNERABILITY AND EFFECTS TESTING/AIRCRAFT GUN FIRING TUNNEL/ELECTRICAL SYSTEM TEST FACILITY/CONTROLLED ENVIRONMENT ENGINE, HYDRAULIC, FUEL, ENVIRONMENTAL, AND ELECTRICAL TEST CAPABILITY/SHIPBOARD CATAPULT AND ARRESTING GEAR/ANTENNA TEST RANGE/LAND, SEA, AND AIR TARGETS/SHIP GROUND STATION FOR LAMPS TESTING/ELECTROMAGNETICALLY SHIELDED HANGAR/PRECISION ELECTRO-OPTICAL TARGET/EXTENSIVE AIRCRAFT AND GROUND-BASED INSTRUMENTATION POOL AIDED BY DEVELOPMENT, FABRICATION AND INSTALLATION FACILITIES.

INSTALLATION: ATLANTIC FLEET WEAPONS TRAINING FACILITY ROOSEVELT ROADS, P.R.

CO: CAPT W. S. WOJTKOWSKI

TECH DIRECTOR: MR. J. R. BROUN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	0.200	0.000
TOTAL PROCUREMENT	0.000	2.280
TOTAL O&M	27.318	24.264
TOTAL OTHER	3.928	6.459
TOTAL ANNUAL LAB	31.446	33.003
TOTAL INHOUSE	6.158	4.083
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	3.077	0.441

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	95	0	53	42
CIVILIAN	46	0	34	12
TOTAL	141	0	87	54

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
3523	0.000	14.957	279.497	294.454	29.894	142.904

...MISSION

TO OPERATE, MAINTAIN AND DEVELOP WEAPONS TRAINING FACILITIES AND SERVICES IN DIRECT SUPPORT OF THE TRAINING OF FLEET FORCES AND OTHER ACTIVITIES AND FOR THE DEVELOPMENT, TEST AND EVALUATION OF WEAPONS SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

CNO PROJ 623 SM-2 BLK II
CNO PROJ 100 AEGIS PROGRAM
CNO PROJ 251 TOMAHAWK
CNO PROJ 547 NEW THREAT UPGRADE
USAF OVER THE HORIZON

...FUNCTIONS/EQUIPMENT/FACILITIES

NAVY'S LARGEST TRAINING FAC FOR ATLANTIC FORCES WITH 202,000 SQ.MI. COMBINED SEA AREA FOR AIR, SURFACE AND SUBSURFACE WARFARE OPERATIONS. CENTRAL COMMAND AND CONTROL SYSTEM WITH NTDS LINKING, REALISTIC EW ENVIRONMENT, SURVEILLANCE/TRACK RADARS, AIR/SURFACE TARGETS PRESENTATION, LARGE SCREEN DISPLAY SYSTEM FOR OPS MONITOR/CONTROL, EVENT RECONSTRUCTION, AND VARIOUS OTHER INSTRUMENTATION SYS. FLTAC FIELD STATION FOR MISSILE ANALYSIS AND EVALUATION. AIR TO GRND AND SURFACE TO SURFACE WEAPONS TARGET FACILITIES FOR CONVENTIONAL AIRCRAFT ORDNANCE DELIVERY, STRAFING AND NAVAL GUNFIRE WITH RADAR, TV BOMB SCORING SYSTEM AND OTHER SCORING/SPOTTING SYSTEMS. UNDERWATER RANGE FOR PRECISION SURFACE AND SUBSURFACE TRACKING, WSATS AND FORACS, VC-8 PROVIDES AIRCRAFT SUPPORT, NAVSTA PROVIDES FOR BOQ AND BEQ.

INSTALLATION: BIODYNAMICS LABORATORY

NEW ORLEANS, LA.

CO: CAPT DOUGLAS W. CALL, MSC

HD RSCH DPT:

DR. MARC WEISS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	2.594	3.368
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.973	1.195
TOTAL ANNUAL LAB	3.567	4.563
TOTAL INHOUSE	2.480	3.464
TOTAL INHOUSE RDTE	2.382	3.368
ANNUAL OPERATING COST	0.704	0.855

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	36	4	8	28
CIVILIAN	36	4	14	22
TOTAL	72	8	22	50

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
1	25.845	23.149	1.276	50.270	0.000	3.613

...MISSION

CONDUCT BIOMED RSCH ON EFFECTS OF MECH FORCES (MOTION,VIBRATION,IMPACT) ENCOUNTERED IN SHIPS AND AIRCRAFT BY NAVY PERSONNEL; ESTABLISH HUMAN TOLERANCE LIMITS FOR THESE FORCES; DEVELOP PREVENTIVE AND THERAPEUTIC METHODS TO PROTECT PERSONNEL FROM DELETERIOUS EFFECTS OF SUCH FORCES.

...CURRENT IMPORTANT PROGRAMS

EFFECTS OF IMPACT ACCELERATION ON HUMAN NEUROPHYSIOLOGY.
DETERMINATION OF HUMAN DYNAMIC RESPONSE TO IMPACT ACCELERATION.
DEVELOPMENT OF SAFE-UNSAFE IMPACT ACCELERATION GUIDELINES.
LONG-TERM EFFECTS OF BIODYNAMIC STRESS EXPERIMENTS.
VALIDATION OF HUMAN ANTHROPOMORPHIC MANIKINS.

...FUNCTIONS/EQUIPMENT/FACILITIES

HORIZONTAL ACCELERATOR, VERTICAL ACCELERATOR,
SHIP MOTION SIMULATOR, MACHINE SHIP, CLINICAL LABORATORY
CLINICAL RADIOGRAPHIC FACILITY, NEUROPHYSIOLOGY LABORATORY
NEUROPATHOLOGY LABORATORY, HUMAN PERFORMANCE LABORATORY, VIVARIUM
FIBERGLASS SHOP.

INSTALLATION: CIVIL ENGINEERING LABORATORY

PORT HUENEME, CA.

CO: CAPT DONALD R. WELLS

TECH DIRECTOR: DR. ROBERT N. STORER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	31.041	29.752
TOTAL PROCUREMENT	0.938	0.903
TOTAL O&M	10.649	10.086
TOTAL OTHER	6.723	6.833
TOTAL ANNUAL LAB	49.351	47.574
TOTAL INHOUSE	39.095	38.092
TOTAL INHOUSE RDTE	24.253	23.196
ANNUAL OPERATING COST	13.940	8.360

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	17	0	5	12
CIVILIAN	412	28	227	185
TOTAL	429	28	232	197

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
32	139.230	25.256	51.514	216.000	15.560	11.089

...MISSION

MISSION OF LABORATORY IS TO BE THE PRINCIPAL RDT&E CENTER FOR NAVY SHORE FACILITIES, FIXED SURFACE AND SUBSURFACE OCEAN FACILITIES AND FOR THE NAVY AND MARINE CORPS CONSTRUCTION FORCES.

...CURRENT IMPORTANT PROGRAMS

NAVY SHORE FACILITIES SUPPORT. NAVY SEAFLOOR INSTALLATIONS. AMPHIBIOUS AND ADVANCED BASE TECHNOLOGY. ENVIRONMENTAL PROTECTION. ORGANIC MATERIALS. ENERGY TECHNOLOGY. DEEP OCEAN TECHNOLOGY. OFFSHORE BULK FUEL TRANSFER. INDEPENDENT EXPLORATORY DEVELOPMENT. INDEPENDENT RESEARCH. CONTAINER OFF-LOADING TRANSFER SYSTEMS (COTS). MARINE CORPS. ARMY.

...FUNCTIONS/EQUIPMENT/FACILITIES

PRESSURE VESSEL FACILITY WITH 9, 18, 34, 72, INCH VESSELS SIMULATION PRESSURES TO OCEAN DEPTHS OF 20,000 FEET. DIVING LOCKER AND EQUIPMENT FOR 10 DIVERS. SEA FLOOR SOILS LAB. ENERGY TEST BED. CLASS G PHOTO LAB. PHYSICAL SECURITY LABS. CHEMISTRY LAB. INSTRUMENTATION LAB. WARPING TUG. ELECTROMAGNETIC FACILITY. CORROSION AND METALURGICAL LABS. ENVIRONMENTAL RESEARCH LAB. CDC 8090 TERMINAL WITH HIGH SPEED READER AND LINE PRINTER. DIGITAL MAG TAPE. PEN PLOTTER. CURRENT SENSOR LAB. ENERGY MONITORING CAPABILITY. PROTOTYPE MACHINE. WELDING, CARPENTER, AND RIGGING SHOPS. SYSTEMS LABS. CONCRETE MIXING LAB. AGGREGATE PROCESSING LAB. DATA PROCESSING CENTER.

INSTALLATION: CLOTHING & TEXTILE RESEARCH FACILITY

NATICK, MA.

OIC: CDR GARY R. PETERSON

TECH DIRECTOR: NORMAN AUDET

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	1.732	1.200
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.181	1.883
TOTAL OTHER	0.059	0.403
TOTAL ANNUAL LAB	3.972	3.486
TOTAL INHOUSE	3.404	3.014
TOTAL INHOUSE RDTE	1.353	0.912
ANNUAL OPERATING COST	0.064	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1	0	1	0
CIVILIAN	62	1	51	11
TOTAL	63	1	52	11

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
2	12.660	10.200	5.630	28.490	2.000		2.500

...MISSION

CONDUCT RESEARCH DEVELOPMENT TEST & EVALUATION & PROVIDE ENGINEERING SUPPORT IN CLOTHING TEXTILES & RELATED FIELDS ASSOCIATED WITH NAVY DRESS AND PROTECTIVE CLOTHING.

...CURRENT IMPORTANT PROGRAMS

BATTLE DRESS AND CBR CLOTHING
MATERIAL INVESTIGATIONS TO MEET NAVY CLOTHING REQUIREMENTS
PROTECTIVE CLOTHING & FOOTWEAR FOR HAZARDOUS ENVIRONMENTS
LIFE SUPPORT SYSTEMS DEVELOPMENT FOR PROTECTIVE CLOTHING
ENVIRONMENTAL PHYSIOLOGY RESEARCH AND EVALUATION

...FUNCTIONS/EQUIPMENT/FACILITIES

HYDRO-ENVIRONMENT TEMPERATURE LAB, AIR CHAMBER-MARINE TANK REPRODUCES AIR-SEA TEMP CONDITIONS FOR WATER IMMERSION PHYSIOLOGY & BUOYANCY TESTS.
ENVIRONMENTAL TEST CHAMBER FOR EVALUATING PROTECTIVE CLOTHING UNDER WORK STRESS & EXTREME TEMPERATURES
INSTRUMENTED THERMAL MANIKIN FOR DETERMINING THERMAL INSULATION OF CLOTHING IN A WET & DRY ENVIRONMENTS.
THERMAL FLAMMABILITY APPARATUS FOR CONDUCTING FLAME RESISTANCE, HEAT RESISTANCE AND THERMAL PROTECTION MATERIAL TESTING.
CHEMICAL & PHYSICAL TESTING EQUIPMENT FOR EVALUATING FABRICS, YARNS, FIBERS, LEATHER, PLASTICS, RUBBERS, DYES, AND FINISHES. SEWING MACHINES, FUSING PRESS FOR DEVELOPING SAMPLE GARMENTS. PATTERN DRAFTING EQUIPMENT.

INSTALLATION: COASTAL SYSTEMS CENTER

PANAMA CITY, FLORIDA

CO: CAPT M. W. GAVLAK

TECH DIRECTOR: T. C. BUCKLEY, ACTG

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	72.816	77.648
TOTAL PROCUREMENT	34.902	35.314
TOTAL O&M	20.768	26.713
TOTAL OTHER	6.736	4.065
TOTAL ANNUAL LAB	135.222	143.740
TOTAL INHOUSE	76.450	81.351
TOTAL INHOUSE RDTE	45.804	46.218
ANNUAL OPERATING COST	22.716	25.368

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	118	0	19	99
CIVILIAN	1192	58	706	486
TOTAL	1310	58	725	585

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1112	389.171	62.890	322.842	774.903	65.942	42.526

...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CENTER FOR MINE AND UNDERSEA COUNTER-MEASURES, SPECIAL WARFARE, AMPHIBIOUS WARFARE, DIVING AND OTHER NAVAL MISSIONS THAT TAKE PLACE PRIMARILY IN THE COASTAL REGIONS.

...CURRENT IMPORTANT PROGRAMS

MINE AND UNDERSEA COUNTERMEASURES (CM)
TORPEDO AND SONAR COUNTERMEASURES, SUBMARINE LAUNCHERS (CM UNIQUE)
SHIP/AIRBORNE MINE COUNTERMEASURES COMBAT SYSTEM INTEGRATION
DIVING, SALVAGE, SPECIAL WARFARE, AND AMPHIBIOUS WARFARE
LAND MINE CM AND MARINE CORPS TACTICAL DECEPTION

...FUNCTIONS/EQUIPMENT/FACILITIES

OCEAN SIMULATION FAC TO 2250' DEPTH, GULF TEST RANGE, SYSTEMS ENG INTEGRATION FAC, UNDERWATER WEAPONS SYS LAB, UNDERWATER EQUIP LAB, HYPERBARIC TEST FAC, HYDROSPACE LAB, MAGNETIC TARGET DETECTION LAB & CLASS RANGE, SOFTWARE ENG ENVIR/TACTICAL EMBEDDED COMPUTERS, LASER LAB, ADV TECH COMPUTATIONAL FAC, VEHICLE TECH FAC, NON-MAG FAC, LABS FOR TRANSDUCER DEV, MATERIALS R&D, ACOUSTIC TESTING, SONAR PROCESSING, METROLOGY, INSTRUMENTATION, OCEANOGRAPHY, COUNTERMEASURE EVALUATION IN REAL TIME SIMULATION, ACTIVE SONAR MODEL, COMPUTER AIDED ENG DESIGN & MFG CAP, 2 VAX 11/780 & ASSOC DATA COMMUNICATIONS SYS, PIER SPACE & BOATS TO INCLUDE RESEARCH VESSELS ATHENA 1&2, MSO 443 FIDELITY, HELIPORT COMPLEX W/2 RH53D, 1 MH53E, 1 NUHIE, AND INDUSTRIAL SHOPS.

INSTALLATION: DAVID W. TAYLOR NAVAL SHIP R&D CENTER

BETHESDA, MARYLAND

CDR: CAPT C. GRAHAM

TECH DIRECTOR: MR. R. E. METREY

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	234.599	235.286
TOTAL PROCUREMENT	42.049	37.110
TOTAL O&M	45.783	60.481
TOTAL OTHER	13.622	16.245
TOTAL ANNUAL LAB	336.053	349.122
TOTAL INHOUSE	195.615	199.175
TOTAL INHOUSE RDTE	133.920	132.967
ANNUAL OPERATING COST	63.824	70.261

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	55	2	21	34
CIVILIAN	2783	113	1618	1165
TOTAL	2838	115	1639	1199

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
413	1728.000	100.000	292.000	2120.000	80.542	138.234

...MISSION

TO BE THE PRINCIPAL NAVY RESEARCH, DEVELOPMENT, TEST, AND EVALUATION (RDT&E) CENTER FOR NAVAL VEHICLES AND LOGISTICS AND TO PROVIDE RDT&E SUPPORT TO THE U.S. MARITIME ADMINISTRATION AND THE MARITIME INDUSTRY.

...CURRENT IMPORTANT PROGRAMS

SSN-21 (PROPULSION/BOW/STRUCTURES/MACHINERY/ACOUSTICS/HYDRODYNAMICS)
SURFACE SHIP AND SUBMARINE SILENCING (ACOUSTIC/NON-ACOUSTIC/MACHINERY),
SURFACE SHIP SURVIVABILITY (STRUCTURES/MACHINERY/MATERIALS)
PROPULSION (HYDRODYNAMICS/MACHINERY/MATERIALS), AERODYNAMICS
(TECHNOLOGY AND ADVANCED CONCEPTS)

...FUNCTIONS/EQUIPMENT/FACILITIES

DEEP WATER ACOUSTIC FAC, SHALLOW/DEEP WATER/HIGH SPEED TOWING BASINS,
WIND & WATER TUNNELS, ANECHOIC FLOW FAC, STRUCTURAL EVAL LAB, UNDER-
WATER EXPLOSIONS BARGE/TEST POND, PHYSICAL METALLURGY LAB, WELDING/
FABRICATION LABS, MACHINERY DEVEL LAB, ENVIRONMENTAL PROTECTION LAB,
DYNAMIC CONTROL SIMULATOR/COMPUTER, MANEUVERING & SEAKEEPING/RADIO-
CONTROLLED MODEL FAC, PRESSURE TANKS/DEEP OCEAN FAC, HIGH SPEED RE-
SEARCH VESSELS, PAINT LAB, FUELS LAB, SHOCK & VIBRATION FAC, CENTRAL
COMPUTER FAC, ELECTRIC PROPULSION TEST CRAFT, TURBO-ELECTRIC PROPULSION
LAB, ACOUSTIC MEASUREMENT BARGE/ACOUSTIC DATA ANALYSIS CEN, CARR INLET
ACOUSTIC RANGE FAC, SANTA CRUZ ACOUSTIC RANGE FAC, SHIP ELECTROMAG
SIGNATURE REDUCT FAC, SUPERCONDUCTING MATLS FOR ELEC DRIVE LG SCALE
VEHICLE, SANTA CRUZ RADAR IMAGING FAC, SURFACE EFFECT SHIP TEST CRAFT.

INSTALLATION: DENTAL RESEARCH INSTITUTE

NTC GREAT LAKES, IL.

CO: CAPT G. WALTER, D.C. USN

SCIENCE DIR: DR. L.G. SIMONSON

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	0.928	1.599
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.961	0.973
TOTAL ANNUAL LAB	1.889	2.572
TOTAL INHOUSE	0.928	1.306
TOTAL INHOUSE RDTE	0.928	1.306
ANNUAL OPERATING COST	0.403	0.403

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	22	6	10	12
CIVILIAN	15	4	5	10
TOTAL	37	10	15	22

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
1	21.264 6.001 9.318 36.583	0.000 1.384

...MISSION

TO CONDUCT RESEARCH DEVELOPMENT TEST AND EVALUATION IN DENTAL AND ALLIED SCIENCES WITH PARTICULAR EMPHASIS ON PROBLEMS OF DENTAL AND ORAL HEALTH IN NAVY AND MARINE CORPS POPULATIONS AND ON PROBLEMS OF FLEET AND FIELD DENTISTRY.

...CURRENT IMPORTANT PROGRAMS

THE PATHOGENESIS OF ORAL AND DENTAL DISEASES.
EVALUATION OF NEW METHODS AND MATERIALS TO ARREST ORAL DISEASES
COMPUTER ASSISTED DIAGNOSIS AND TREATMENT OF DENTAL EMERGENCIES
AUTOMATED APPLICATIONS IN NAVY DENTAL EPIDEMIOLOGY
RAPID IDENTIFICATION OF DESTRUCTIVE PERIODONTAL DISEASE

...FUNCTIONS/EQUIPMENT/FACILITIES

AMINO ACID ANALYZER/ATOMIC ABSORPTION UNIT/LIQUID SCINTILLATION COUNTER/
MICROCOMPUTER/GAS CHROMATOGRAPH UNIT/PHOTOMICROSCOPE/ELECTRON MICROSCOPE
CRYMICROTOME/ANIMAL SURGERY ROOM/SPECTROPHOTOMETERS/
THERMAL BALANCE/VIVARIUM/INCUBATORS/CENTRIFUGES/BIOLOGICAL SAFETY
CABINET/FRACTIONATORS/SHAKERS/PHOTO LAB/OSCILLISCOPE
TISSUE CULTURE.

INSTALLATION: ENVIRONMENTAL PREDICTION RESEARCH FACILITY MONTEREY, CA.

CO: CDR W.L. SHUTT

TECH DIRECTOR: DR. J. HOVERMALE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	5.687	5.991
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.325	0.481
TOTAL OTHER	0.519	0.569
TOTAL ANNUAL LAB	6.531	7.041
TOTAL INHOUSE	3.852	3.944
TOTAL INHOUSE RDTE	3.543	3.602
ANNUAL OPERATING COST	1.388	1.244

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	12	0	5	7
CIVILIAN	58	15	44	14
TOTAL	70	15	49	21

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
0	18.500	3.500	6.500	28.500		0.000	2.776

...MISSION

CONDUCT RESEARCH & DEVELOPMENT DIRECTED TOWARD PROVIDING OBJECTIVE LOCAL REGIONAL AND GLOBAL ENVIRONMENTAL ANALYSIS AND PREDICTION TECHNIQUES
PROVIDE PLANNING, MODELING & EVALUATION SERVICES TO DETERMINE THE EFFECT OF ENVIRONMENTAL ELEMENTS ON NAVAL WEAPONS SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

DEVELOP SYSTEM FOR PROCESS/DISPLAY OF ENVIRONMENTAL SATELLITE DATA
DEVELOP COMPUTER MODELS WHICH ANALYZE/ASSIMILATE ATMOSPHERIC DATA
DEVELOP TECHNIQUES PREDICT/DIAGNOSE ATMOS EFFECTS ON WEAPONS SYSTEMS
DEVELOP OBJECTIVE LOCAL/REGIONAL ATMOS ANALYSIS/PREDICTION TECHNIQUES
DEVELOP SYNOPTIC/SUBSYNOPTIC AND MESOSCALE ATMOS PREDICTION MODELS

...FUNCTIONS/EQUIPMENT/FACILITIES

CAPABILITY OF RECEIVING, ENHANCING AND ANALYZING REMOTE SENSED ATMOS DATA.
CAPABILITY OF BUILDING, ANALYZING AND MODIFYING GLOBAL, REGIONAL AND LOCAL WEATHER MODELS.
CAPABILITY TO DEVELOP ATMOS PREDICTION AIDS FOR USE BY NON-GRADUATE METEOROLOGICAL PERSONNEL.
ECLIPSE S250 COMPUTER ACCESS TO CYBER 203 AND 175 COMPUTERS.

INSTALLATION: EXPLOSIVE ORDNANCE DISPOSAL TECH CEN

INDIAN HEAD, MARYLAND

CO: CAPT J. T. KENNEDY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	56.959	64.770
TOTAL PROCUREMENT	14.769	7.291
TOTAL O&M	9.425	5.109
TOTAL OTHER	1.266	1.146
TOTAL ANNUAL LAB	82.419	78.316
TOTAL INHOUSE	26.735	22.714
TOTAL INHOUSE RDTE	9.589	50.876
ANNUAL OPERATING COST	6.671	7.600

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	71	0	13	58
CIVILIAN	229	1	63	166
TOTAL	300	1	76	224

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1172	85.397	20.817	79.944	186.158	5.987	4.550

...MISSION

CONDUCT RESEARCH DEVELOPMENT TEST AND EVALUATION CONCERNING BOTH THE DISPOSAL AND RENDERING SAFE PROCEDURES FOR CONVENTIONAL AND SPECIAL WEAPONS, GUIDED MISSILES, UNDERWATER WEAPONS, EXPLOSIVES, BIO AND CHEM MUNITIONS, BOTH U.S. AND FOREIGN, PLUS THE REQUIRED TOOLS AND EQUIPMENT

...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT OF RENDER SAFE AND DISPOSAL TOOLS FOR CONVENTIONAL MUNITIONS
DEVELOPMENT OF SPECIAL OPERATIONS SPECIAL TECHNOLOGY
TERRORIST DEVICE COUNTERMEASURES
IMPROVISED NUCLEAR DEVICE COUNTERMEASURES
EXPLOSIVE RANGE CLEARANCE TECHNIQUES

...FUNCTIONS/EQUIPMENT/FACILITIES

DEVELOP EXPLOSIVE ORDNANCE DISPOSAL (EOD) PROCEDURE, PREPARE AND PUBLISH EOD PUBLICATIONS FOR JOINT-SERVICE USE, CONDUCT EXP. AND ADV. DEVELOPMENT LEADING TO SPECIALIZED TOOLS AND EQUIP. NEEDED TO LOCATE, IDENTIFY, RECOVER, RENDER-SAFE AND DISPOSE OF ALL TYPES OF EXPLOSIVE ORDNANCE. PREPARE AND MAINTAIN DOCUMENTATION FOR EOD TOOLS AND EQUIP. CONDUCT FIRST ARTICLE INSPECTION ON EOD TOOLS BEING PRODUCED FOR ALL SERVICES. CONDUCT INITIAL EVALUATION OF FOREIGN EXPLOSIVE ORDNANCE. CONDUCT EXP. ENGR DEVELOPMENT LEADING TO ACCESS AND DISABLEMENT COUNTERMEASURES AGAINST IMPROVISED NUCLEAR DEVICES. CAPABILITY OF TESTING EOD TOOLS TO A DEPTH OF 400 FT IN A DIVING CHAMBER. CAPABILITY OF ANALYZING HIGH SPEED EVENTS WITH FLASH X-RAYS AND PHOTOS.

INSTALLATION: HEALTH RESEARCH CENTER

SAN DIEGO, CA.

CO: CAPT R. D. CHANEY, MC, USN

CHIEF SCIENTIST: DR. E. K. GUNDERSON

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	4.408	5.420
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.273	1.337
TOTAL ANNUAL LAB	5.681	6.757
TOTAL INHOUSE	3.417	3.874
TOTAL INHOUSE RDTE	3.417	3.874
ANNUAL OPERATING COST	0.208	0.354

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	25	12	14	11
CIVILIAN	62	14	30	32
TOTAL	87	26	44	43

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
1	19.052 7.159 0.000 26.211	0.147 2.207

...MISSION

TO SUPPORT FLEET OPERATIONAL READINESS THROUGH RESEARCH, DEVELOPMENT, TEST, AND EVALUATION OF BIOMEDICAL AND PSYCHOLOGICAL ASPECTS OF NAVY AND MARINE CORPS PERSONNEL HEALTH AND PERFORMANCE.

...CURRENT IMPORTANT PROGRAMS

EVAL OF HEALTH RISKS FOR NAVY OCCUPATIONS, NEUROMETRIC SELECTION OF SONAR OPERATORS. HUMAN PERF EFFECTIVENESS/PHYSIO ADAPTATION DURING SUSTAINED OPERATIONS. DEVEL/TESTING/COMPUTERIZED OPERATIONAL MEDICAL INFO SYSTEMS. DEVELOP ACCURATE NON-BATTLE INJURY DATA. STUDY PERFORMANCE DEGRADATION IN COLD. CHEM DEF MEASURES ON SUSTAINED PERFORMANCE.

...FUNCTIONS/EQUIPMENT/FACILITIES

ELECTROENCEPH MONITORING
CARDIOVASCULAR STRESS LAB
MUSCLE STRENGTH TESTING LAB
COMPUTER STORAGE TOTAL USN/USMC HEALTH DATA
MEDICAL INFORMATION SYSTEMS
VAX/VMS

INSTALLATION: MEDICAL RESEARCH INSTITUTE

BETHESDA, MD.

CO: CAPT KURT SORENSEN

SCIENCE DIR: DR. L. A. KIESOW

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	18.883	19.269
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.080	0.080
TOTAL OTHER	10.935	10.652
TOTAL ANNUAL LAB	29.898	30.001
TOTAL INHOUSE	16.890	17.381
TOTAL INHOUSE RDTE	16.377	16.847
ANNUAL OPERATING COST	6.792	6.792

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	260	51	81	179
CIVILIAN	191	38	99	92
TOTAL	451	89	180	271

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
5	155.827	24.395	1.068	181.290	8.303		20.160

...MISSION

CONDUCT BASIC & APPLIED RESEARCH & DEVELOPMENT CONCERNED WITH THE HEALTH SAFETY & EFFICIENCY OF NAVY AND MARINE CORPS PERSONNEL.

...CURRENT IMPORTANT PROGRAMS

COMBAT CASUALTY CARE TECHNOLOGY, WOUND HEALING, SEPTIC SHOCK, TISSUE TRANSPLANTATION, MICROBIOLOGY, VACCINE DEV, RAPID DIAGNOSIS, EPIDEMIOLOGY, DIVING MEDICINE (PHYSIOLOGY, TREATMENT, SAFETY) ENVIRONMENTAL STRESS (ATHERMAL, CHEMICAL, TOXIC) BONE MARROW TRANSPLANTATION, STEM CELLS GROWTH FACTORS.

...FUNCTIONS/EQUIPMENT/FACILITIES

HYPERBARIC RESEARCH FACILITY WITH MAN-RATED HYPERBARIC CHAMBERS
HEAT & COLD STRESS PHYSIOLOGY (EQUIPMENT & FACILITIES)
HUMAN TISSUE PRESERVATION & STORAGE (EQUIPMENT & FACILITIES)
BIOHAZARDOUS MATERIALS HANDLING LAB (EQUIPMENT & FACILITIES)
TOXICOLOGY EVALUATION (EQUIPMENT & FACILITIES)
TRANSMISSION & SCANNING ELECTRON MICROSCOPES, FLUORESCENT ACTIVATED CELL SORTER & COMPUTERS,
ANIMAL FACILITIES & OPERATING ROOMS,
LAB EQUIPMENT & FACILITIES FOR BASIC & APPLIED BIOCHEMICAL
MICROBIOLOGICAL & PSYCHOLOGICAL & TRANSPLANTATION STUDIES

INSTALLATION: MEDICAL RESEARCH UNIT NO.2

MANILA, PHILIPPINES

CO: CAPT J. A. COOLBAUGH

SCIENCE DIR: DR. C. G. HAYES

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	2.983	3.044
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.180	1.180
TOTAL ANNUAL LAB	4.163	4.224
TOTAL INHOUSE	2.983	3.044
TOTAL INHOUSE RDTE	2.983	3.044
ANNUAL OPERATING COST	0.971	0.998

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	24	4	21	3
CIVILIAN	101	5	70	31
TOTAL	125	9	91	34

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
1	20.827	19.824	0.000	40.651		0.000	1.596

... MISSION

TO CONDUCT RESEARCH AND DEVELOPMENT FOR DIAGNOSIS AND TREATMENT OF INFECTIOUS DISEASES OF MILITARY IMPORTANCE THAT ARE ENDEMIC IN THE ASSIGNED GEOGRAPHICAL AREA. TO PERFORM OTHER SUCH TASKS AS DIRECTED BY COMMANDER, NAVMEDCOM, AND CO, NMRDC.

...CURRENT IMPORTANT PROGRAMS

EPIDEMIOLOGICAL STUDY ON HIV INFECTION IN THE PHILIPPINES.
 EPIDEMIOLOGICAL STUDY ON HTLV-III INFECTION IN THE PHILIPPINES.
 IDENTIFY AGENTS THAT CAUSE DIARRHEA IN SOUTHEAST ASIA.
 RAPID DIAGNOSIS AND TREATMENT OF MALARIA, SELECT SITES FOR MALARIA STUDY
 EPIDEMIOLOGY & DRUG RESISTANCE STUDY OF GONNORRHEA IN S.E. ASIA.

...FUNCTIONS/EQUIPMENT/FACILITIES

FULLY EQUIPPED AND FUNCTIONAL VIROLOGY, MICROBIOLOGY, PARASITOLOGY, ENTOMOLOGY, AND CLINICAL LABORATORIES IN BOTH MANILA, RP AND JAKARTA, INDONESIA, NAMRU-2 MANILA AND JAKARTA, INDONESIA HAVE ANIMAL FACILITIES
 NAMRU-2, MANILA HAS THE PREMIER INSECTARY IN THE PHILIPPINES. WANG VS ADP SYSTEM FOR BIOSTATISCAL APPLICATIONS. DETACHMENT HAS ESTABLISHED A STATE-OF-THE-ART INTENSIVE CARE UNIT.

INSTALLATION: MEDICAL RESEARCH UNIT NO.3

CAIRO, EGYPT

CO: CAPT MICHAEL E. KILPATRICK

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	5.416	4.597
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.034	0.049
TOTAL OTHER	1.296	1.632
TOTAL ANNUAL LAB	6.746	6.278
TOTAL INHOUSE	5.450	4.701
TOTAL INHOUSE RDTE	5.416	4.597
ANNUAL OPERATING COST	1.020	1.050

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	7	13	16
CIVILIAN	205	21	84	121
TOTAL	234	28	97	137

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
5	89.472	8.962	61.072	159.506		9.054	1.184

...MISSION

TO CONDUCT RDT&E RELATING TO THE HEALTH SAFETY AND READINESS OF NAVAL PERSONNEL ASSIGNED TO S.W.ASIA AND AFRICA AND TO PERFORM SUCH OTHER FUNCTIONS AS MAY BE DIRECTED BY HIGHER AUTHORITY.

...CURRENT IMPORTANT PROGRAMS

EPIDEM.AND PREV.OF MIL.RELEVANT INFECT.DISEASES IN S.W.ASIA AND AFRICA.
THERAPY OF INFECT. DISEASE IN S.W.ASIA AND AFRICA
RAPID & EARLY DIAG. OF INFECT.DISEASES OF MIL.IMPORT.IN S.W. ASIA AND AFRICA.

...FUNCTIONS/EQUIPMENT/FACILITIES

A STATE OF THE ART MEDICAL RESEARCH LABORATORY WITH ANIMAL FACILITIES AND A 40-BED WARD. CAPABILITIES IN ADVANCED TECHNIQUES, SEROLOGY, HYBRIDOMA TECH. AND HYBRIDIZATION OF DNA ALONG WITH PRODUCTION OF DNA PROBES, AMINO ACID ANALYSIS, FLUORESCENT MICROSCOPY AND COMPUTER LINKED ELISA READER, CYTOFLUOROGRAP, HIGH PRESSURE LIQUID CHROMATOGRAPHY, GAS LIQUID CHROMATOGRAPHY, SPECTRO PHOTO METER, BETA-SCINTILLATION COUNTER, GAMA-COUNTER, GAUMN CELL 40, CENTRI, ULTRACENTRIFUGES AND CRYOPRESERVATION, P-3 CONTAINMENT CAPABILITY.

INSTALLATION: NAVAL RESEARCH LABORATORY

WASHINGTON, DC

CDR: CAPT W. G. CLAUTICE

DIR OF RSCH: DR. T. COFFEY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	242.188	240.284
TOTAL PROCUREMENT	14.565	14.833
TOTAL O&M	14.364	14.628
TOTAL OTHER	57.945	59.323
TOTAL ANNUAL LAB	329.062	329.068
TOTAL INHOUSE	262.655	267.064
TOTAL INHOUSE RDTE	189.435	192.499
ANNUAL OPERATING COST	111.226	117.984

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	112	3	42	70
CIVILIAN	3614	728	1554	2060
TOTAL	3726	731	1596	2130

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1181	2689.754	196.018	290.576	3176.348	137.970	262.061

...MISSION

TO CONDUCT A BROADLY BASED MULTIDISCIPLINARY PROGRAM OF SCIENTIFIC RESEARCH AND ADVANCED TECHNOLOGICAL DEVELOPMENT DIRECTED TOWARD NEW AND IMPROVED MATERIALS, EQUIPMENT, TECHNIQUES, SYSTEMS, AND RELATED OPERATIONAL PROCEDURES FOR THE NAVY.

...CURRENT IMPORTANT PROGRAMS

ADVANCED ECM AND DECOYS FOR NAVY EW SYSTEMS
ADVANCED ACOUSTIC AND NON-ACOUSTIC SUBMARINE DETECTION PROGRAMS
SATELLITE PROGRAMS
LOW OBSERVABLES TECHNOLOGY
DIRECTED ENERGY DEVICES

...FUNCTIONS/EQUIPMENT/FACILITIES

SURVEILLANCE SYSTEMS; COMPONENT TECHNOLOGY; MATERIALS; ENERGY CONVERSION; SENSOR SYSTEMS; DIRECTED ENERGY; ENVIRONMENTAL EFFECTS; BIOMOLECULAR ENGINEERING; FIRE SUPPRESSION/PROTECTION; LOW OBSERVABLE TECH; BASIC PHYSICAL SCIENCES; FLUID DYNAMICS; COUNTERMEASURES; COMMUNICATIONS NAVIGATION; UNDERSEA TECH; SONAR STANDARDS; SPACE SYSTEMS; ARTIFICIAL INTEL; SCIENCE & TECHNOLOGY, FIBER OPTICS SYS; SUPERCONDUCTIVITY; HIGH LEVEL RADIATION LABORATORY, ENCLOSED 11,500 CUBIC FOOT FIRE TEST FACILITY, DIVERSE HIGH ENERGY LASERS, 200 KILOGAUSS HIGH FIELD MAGNET FACILITY, SPACE SIMULATION FACILITIES, MAJOR PLASMA PHYSICS FACILITIES, ELECTRONIC WARFARE CENTRAL TARGET SIMULATOR, CLASS VI COMPUTER, FOUR ORION AIRCRAFT FOR RESEARCH SUPPORT, AND ONE SHIP FOR R&D ON FIRE AND PERSONNEL PROTECTION.

INSTALLATION: OCEAN RESEARCH & DEVELOPMENT CENTER

BAY ST LOUIS, MS.

CO: CAPT A.C. ESAU

TECH DIRECTOR: DR. W.B. MOSELEY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	48.781	50.806
TOTAL PROCUREMENT	2.725	2.807
TOTAL O&M	2.146	2.210
TOTAL OTHER	1.243	1.337
TOTAL ANNUAL LAB	54.895	57.160
TOTAL INHOUSE	29.885	31.090
TOTAL INHOUSE RDTE	25.591	26.680
ANNUAL OPERATING COST	11.439	12.339

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	14	0	7	7
CIVILIAN	401	76	214	187
TOTAL	415	76	221	194

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	113.249	24.986	68.305	206.540	18.400	33.702

...MISSION

TO CARRY OUT A BROAD BASED RDT&E PROGRAM IN OCEAN ACOUSTICS SCIENCE & TECHNOLOGY WITH EMPHASIS ON UNDERSTANDING OCEAN PROCESSES THRU MEASUREMENT & ANALYSIS, AND THE EFFECTS OF THIS OCEAN ENVIRONMENT ON NAVY SYSTEMS AND OPERATIONS.

...CURRENT IMPORTANT PROGRAMS

LOW FREQUENCY ACOUSTIC REVERBERATION
ADVANCED UNDERWATER ACOUSTIC MODELING
AIR DEFENSE INITIATIVE (ENVIRONMENTAL SUPPORT)
OCEAN GEOPHYSICS BASIC RESEARCH
OCEAN SCIENCES BASIC RESEARCH

...FUNCTIONS/EQUIPMENT/FACILITIES

SECURE & UNCLASSIFIED ACOUSTIC DATA PROCESSING; ARRAY DESIGN TEST FABRICATION; MICROPROCESSOR DESIGN & DEVELOP; ACOUSTIC DATA BASES; OCEAN ACOUSTICS MOBILE UNDRWTR TEST BED; ENVIRON. ACOUSTICS LAB, MASS SPECTROMETER, GAS CHROMATOGRAPH SYS, TOWED UNDRWTR PUMPING SYS, DTAGS, ACOUSTIC SEDIMENT CLASSIFIER, SEDIMENT CHARACT. PROBES, SIDE SCAN SONAR SYS., WAVE CURRENT SIMULATOR, SCANNING & TRANSMISSION ELECTRON MICROSCOPES WITH IMAGE ANALYSIS SYSTEM & X-RAY SPECTROMETER, OCEAN BOTTOM SEISMETERS, GEOTECH LAB, X-RAY FLUORESCENT FACILITY, PATTERN ANALYSIS LAB (TEMPEST CERT.), MAGNETIC OBSERVATORY, OPTICS LAB, HYDROGRAPHIC AIRBORNE LASER SYS, & AEM SYS.

INSTALLATION: OCEAN SYSTEMS CENTER

SAN DIEGO, CA.

CDR: CAPT E.G. SCHWEIZER, JR.

TECH DIRECTOR: MR. R.M. HILLYER

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RTE	305.417	283.659
TOTAL PROCUREMENT	83.018	70.896
TOTAL O&M	96.488	97.969
TOTAL OTHER	17.994	11.497
TOTAL ANNUAL LAB	502.917	464.021
TOTAL INHOUSE	243.195	217.691
TOTAL INHOUSE RTE	156.888	137.372
ANNUAL OPERATING COST	55.131	60.821

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	229	0	76	153
CIVILIAN	3087	190	1580	1507
TOTAL	3316	190	1656	1660

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
2267	1392.556	201.642	205.530	1799.728	70.818	191.193	

...MISSION

TO BE THE PRINCIPAL NAVY RESEARCH, DEVELOPMENT, TEST AND EVALUATION CENTER FOR COMMAND CONTROL, COMMUNICATIONS, OCEAN SURVEILLANCE, SURFACE- AND AIR-LAUNCHED UNDERSEA WEAPONS SYSTEMS, AND SUBMARINE ARCTIC WARFARE.

...CURRENT IMPORTANT PROGRAMS

COMMAND CONTROL INCL MULTI-PLAT C3 & CSI, HUMAN FACTORS, & CV/CVN SYS, COMMS INCL INT/EXT SHIPBD COMMS, STRATEGIC SYS & CONNECTIVITY, SURVEILLANCE, SIG WARFARE/C3CM, SPACE-BASED SYS, INTEGRATED ASW INCL SURF/AIR-LAUNCHED UNDERSEA WEAPONS, OCEAN SCIENCES, MARINE BIOSCIENCES, ENVIRON DESCRIP/PREDICTION, TELE-OP/REMOTE PRESENCE, OCEAN ENGINEERING, ROV/ADV.

...FUNCTIONS/EQUIPMENT/FACILITIES

ARCTIC RESEARCH FACILITY, C3 SITE, TACTICAL FLAG COMMAND CENTER (TFCC) ADVANCED COMMAND CONTROL ARCHITECTURE TEST BED (ACCAT), ADVANCED COMBAT DIRECTION SYSTEM (ACDS) DEVELOPMENT SITE, AND BATTLE GROUP TACTICAL TRAINER (BGTT); RESEARCH, EVALUATION, SIMULATION, AND ANALYSIS FACILITY (RESA), OCEAN SURVEILLANCE FAC, SURVEILLANCE TECH AND APPLIED RSCH FAC (STARF); INTEGRATED UNDERSEA SURV. SYS. (IUSS) FAC.; MICROWAVE AND MM WAVE ANTENNA PATTERN RANGE COMPLEX; STABLE SEMI-SUBMERGED PLATFORM; TRANSDUCER EVAL. CTR; MICRO-ELECTRONICS LAB COMPLEX; SIMULATION AND REAL TIME COMPUTER FACS. FOR DEVEL. OF OCEAN SURV. AND ASW SYS; TORPEDO PROPULSION TEST CELLS AT MORRIS DAM; BIO-SCIENCE FAC. ENGAGED IN RSCH., TRAINING AND HANDLING OF MARINE MAMMALS; SAN CLEMENTE ISLAND SEA TEST RANGES FOR UNDERWATER WEAPONS.

INSTALLATION: OFFICE OF NAVAL RESEARCH/TECHNOLOGY

ARLINGTON, VIRGINIA

CDR: RADM J. R. WILSON, JR

TECH DIRECTOR: DR. P. A. SELWYN

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	2457.951	1631.136
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.377	2.474
TOTAL ANNUAL LAB	2460.328	1633.610
TOTAL INHOUSE	42.729	43.835
TOTAL INHOUSE RDTE	42.729	43.835
ANNUAL OPERATING COST	21.426	21.635

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	37	4	34	3
CIVILIAN	447	101	156	291
TOTAL	484	105	190	294

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
0	0.000 90.720 9.930 100.650	0.000 2.130

...MISSION

RESPONSIBLE FOR MANAGEMENT OF NAVY RESEARCH PROGRAM AND
EXPLORATORY DEVELOPMENT PROGRAM THRU NAVY R&D LABS/CTRS, FINANCIAL
MANAGEMENT OF RDT&EN APPROPRIATION FOR ASN (RE&S), CONTRACT MNGT, OF
FEDERALLY FUNDED UNIVERSITY RESEARCH.

...CURRENT IMPORTANT PROGRAMS

BASIC RESEARCH AND EXPLORATORY DEVELOPMENT PROGRAMS
NAVY-WIDE RDT&E APPROPRIATION ADMINISTRATION
FOCAL POINT FOR WORLD-WIDE RESEARCH INFORMATION
CONTRACT MANAGEMENT PROGRAM AT EDUCATIONAL INSTITUTIONS

...FUNCTIONS/EQUIPMENT/FACILITIES

ADMINISTRA. OF RESRCH PROGRAMS IN PHYS SCIENCES, MATHEMATICAL & INFO
SCIENCES, BIOLOGICAL SCIENCES, PSYCHOLOGICAL SCIENCES, ARCTIC & EARTH
SCIENCES, MT'L SCIENCES, ENGINEERING SCI, OCEAN SCI & TECH ADMIN OF
ENTIRE EXPLOR DEVEL PROGRAM INCLUDING MGMT THRU NAVY LABS/CENTERS.
PROGRAMS RANGE FROM ANALYTICAL INVESTIGA TO TEST & EVAL OF SYSTEM
PROTOTYPES. ACTIVITIES INCLUDE NRL, NORDA, NEPRF.
MAINTAINS RESEARCH RESERVE PROGRAM. COORDINATES NAVAL RESEARCH AND
PROMOTES COOPERATIVE RESEARCH EFFORTS WITHIN NAVY, OTHER DOD, NSF, NASA,
DEPT OF ENERGY AND OTHER GOVERNMENT RESEARCH GROUPS AND WITH INDUSTRY
AND NON-PROFIT GROUPS AND ADMINISTRATION OF NAVAL RESEARCH ADVISORY
COMMITTEE.

INSTALLATION: ORDNANCE MISSILE TEST STATION

WHITE SANDS, NM

CO: CAPT D. G. MAXWELL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	4.400	4.860
TOTAL PROCUREMENT	2.942	5.206
TOTAL O&M	1.047	1.306
TOTAL OTHER	1.926	1.271
TOTAL ANNUAL LAB	10.315	12.643
TOTAL INHOUSE	4.330	4.141
TOTAL INHOUSE RDTE	0.883	0.921
ANNUAL OPERATING COST	1.523	1.565

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	94	0	8	86
CIVILIAN	68	0	6	62
TOTAL	162	0	14	148

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
95	10.057	30.108	191.551	231.716	6.775		6.849

...MISSION

PROVIDE QUALITY & RESPONSIVE TECH & MATERIAL SUPPORT TO THE FLEET
FOR LAND BASED FLIGHT TEST & EVAL; OPERATE THE DOD MISSILE TEST RANGE AT
WHITE SANDS; AS ASSIGNED BY COMMANDER, NAVAL SEA SYSTEMS COMMAND.

...CURRENT IMPORTANT PROGRAMS

STANDARD MISSILE 1 AND 2/AEGIS FLIGHT TESTING
CRUISE MISSILE FLIGHT TESTING
RAM FLIGHT TESTING
16 INCH GUN PROGRAM (REMOTE LAND BASE TEST SITE)
UPPER ATMOSPHERE RESEARCH ROCKET LAUNCHING

...FUNCTIONS/EQUIPMENT/FACILITIES

FLIGHT TEST TERRIER/TARTAR/STANDARD/SAM GUIDED MISSILES AND PROJECTILES
LAUNCH VARIOUS SOUNDING ROCKETS FOR UPPER ATMOSPHERIC STUDY & IN SUP-
PORT OF SDIO. CONDUCT VARIOUS DEVELOPMNT TESTS FOR SSM & SAM PROJECTS,
ROLLING DRONE SUPPORT & VANDAL MISSILE HIGH SPEED TARGETS. 5 INCH GUIDED
PROJECTILE FIRING CAPABILITY. PROVIDE WARHEAD & EOD ANALYSIS ARENA.
MK 41 VLS LAUNCH SUPPORTING SM, VLA, TOMAHAWK, 16 INCH GUN AMMUNITION
IMPROVEMENT PROGRAM WITH NEW REMOTE LAND BASED TEST SITE. SEALANCE LAND
BASED TEST SITE. NATO SEASPARROW LAND BASED TEST SITE. SUPPORT/CONDUCT
ALL HIGH ENERGY LASER TESTS AT WHITE SANDS MISSILE RANGE WITH MIRACLE
LASER SEALITE BEAM DIRECTOR. SPONSOR NAVAIR LAUNCH MISSILES, BOMB, AND
OTHER WEAPONS SYSTEM TEST.

INSTALLATION: PACIFIC MISSILE TEST CENTER

POINT MUGU, CA.

CDR: RADM G. H. STROHSAL

EXEC DIRECTOR: MR. W. R. HATTABAUGH

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	199.234	241.894
TOTAL PROCUREMENT	218.025	244.153
TOTAL O&M	190.472	164.959
TOTAL OTHER	64.393	78.060
TOTAL ANNUAL LAB	672.124	729.066
TOTAL INHOUSE	373.389	413.905
TOTAL INHOUSE RDTE	139.464	169.326
ANNUAL OPERATING COST	102.776	110.643

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1222	0	0	1222
CIVILIAN	4144	13	1267	2877
TOTAL	5366	13	1267	4099

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
27093	1275.267	371.655	3440.819	5087.741	211.441	208.582

...MISSION

PERFORM DEVELOPMENT TEST AND EVALUATION DEVELOPMENT SUPPORT, AND FOLLOW-ON ENGINEERING, LOGISTIC, AND TRAINING SUPPORT FOR NAVAL WEAPONS SYSTEMS, AND RELATED DEVICES, AND PROVIDE MAJOR RANGE, TECHNICAL AND BASE SUPPORT FOR NAVY RDT&E, FLEET, AND OTHER DOD AND GOV'T USERS.

...CURRENT IMPORTANT PROGRAMS

AIR AND SURFACE LAUNCHED CRUISE MISSILE & STRATEGIC SYSTEMS, DEVELOPMENT SUPT, T&E & ISE ON AIR LAUNCHED GUIDED WEAPONS AND CONVENTIONAL ORDNANCE. EW SYS READINESS & MISSION PERFORMANCE. EWSSA, SUPT EQUIP DEVELOPMENT. TARGETS DEVELOPMENT AND LIFE CYCLE TARGETS MANAGEMENT. RANGE SYSTEMS DEVELOPMENT. FLEET READINESS SPT. MOBILE SEA RANGE.

...FUNCTIONS/EQUIPMENT/FACILITIES

LABORATORIES FOR AIRBORNE WEAPONS SYSTEMS INTEGRATION, TEST, AND EVALUATION INCLUDING SOFTWARE SUPPORT AND ELECTRONIC WARFARE SYSTEMS. LABS INCLUDE HARDWARE-IN-THE-LOOP SIMULATION, ENVIRONMENTAL TEST/RELIABILITY GROWTH, ANECHOIC MEASUREMENTS, AND ALL UP ROUND TEST. A 32000 SQ MI SEA TEST RANGE PROVIDES FOR FLIGHT TEST OF AIRCRAFT AND MISSILE SYSTEMS RANGE INSTRUMENTATION INCLUDES C-BAND RADARS, LAND S-BAND TELEMETRY, DATA TRANSMISSION, DISPLAY, AND REDUCTION, AIR AND SEA TARGETS WITH VARIOUS AUGMENTATION, COMMAND CONTROL/FLIGHT TERMINATION, LAUNCH AND RECOVERY, AND COMMUNICATIONS. A 800 SQ MI UNDERWATER RANGE AT BARKING SANDS, HAWAII, PROVIDES FLEET TRAINING SUPPORT IN AIR, SURFACE, AND ASW WARFARE, PMTC AIRCRAFT PROVIDE EXTENSIVE DATA COVERAGE TO TRIDENT PACIFIC TEST AND TOMAHAWK INLAND FLIGHTS FROM PMTC TO THE UTAH TEST RANGE.

INSTALLATION: PERSONNEL RESEARCH & DEVEL CENTER

SAN DIEGO, CA.

CO: CAPT B.E. BACON

TECH DIRECTOR: DR. J.S. MCMICHAEL

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	21.136	18.720
TOTAL PROCUREMENT	0.237	0.132
TOTAL O&M	10.697	9.436
TOTAL OTHER	1.382	1.408
TOTAL ANNUAL LAB	33.452	29.696
TOTAL INHOUSE	18.658	16.045
TOTAL INHOUSE RDTE	11.184	11.557
ANNUAL OPERATING COST	4.543	5.412

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	23	0	16	7
CIVILIAN	271	71	196	75
TOTAL	294	71	212	82

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
3	72.100	18.417	0.000	90.517		1.380	12.954

...MISSION

TO BE THE PRINCIPAL RESEARCH AND DEVELOPMENT CENTER FOR THE DEPARTMENT OF THE NAVY'S PLANNING AND UTILIZATION OF MANPOWER AND PERSONNEL AND TO PURSUE A COORDINATED TECHNICAL DEVELOPMENT PROGRAM IN THE AREAS OF EDUCATION AND TRAINING.

...CURRENT IMPORTANT PROGRAMS

MANPOWER MANAGEMENT
EDUCATION AND TRAINING
PERSONNEL ADMINISTRATION
ORGANIZATIONAL SYSTEMS
PERFORMANCE TESTING

...FUNCTIONS/EQUIPMENT/FACILITIES

AN IBM 4381/23 AND TWO VAX 11/780 SYSTEMS PROVIDE GENERAL PURPOSE COMPUTING SERVICES, ELECTRONIC MAIL, AND ACCESS TO THE DEFENSE DATA NETWORK (DDN) FOR CENTER RESEARCH AND ADMINISTRATIVE OPERATIONS. SUPPLEMENTED BY A LARGE INVENTORY OF MICROCOMPUTERS SUPPORTING SPECIFIC RESEARCH PROJECTS AND AN IBM 4341 USED AS STAND-ALONE PROCESSOR AND REMOTE JOB ENTRY STATION.

INSTALLATION: SUBMARINE MEDICAL RESEARCH LABORATORY

GROTON, CT.

CO: CAPT C.A. HARVEY, MC, USN

SCIENCE DIR:

DR. S. LURIA

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	2.977	2.533
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.001	0.000
TOTAL OTHER	1.066	1.688
TOTAL ANNUAL LAB	4.044	4.221
TOTAL INHOUSE	2.779	2.432
TOTAL INHOUSE RDTE	2.769	2.378
ANNUAL OPERATING COST	1.157	1.071

PERSONNEL DATA (END OF FY 1980)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	31	2	7	24
CIVILIAN	46	11	26	20
TOTAL	77	13	33	44

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
1	40.514	14.099	0.000	54.613		1.315	2.976

...MISSION

TO CONDUCT MEDICAL RESEARCH AND DEVELOPMENT AS IT RELATES TO SUBMARINE SHIPBOARD, DIVING AND AMPHIBIOUS ENVIRONMENTS.

...CURRENT IMPORTANT PROGRAMS

COMPUTER-BASED MEDICAL DIAGNOSIS FOR USE ABOARD SUBMARINES.
MEDICAL PROBLEMS ASSOCIATED WITH PRESSURIZED SUBMARINE RESCUE.
REDUCTION OF ATTRITION RATES FOR SUBMARINERS BY BETTER SCREENING.
IMPROVED PERFORMANCE ON AUDITORY SONARS AND VISUAL SONAR DISPLAYS.
PHYSIOLOGICAL AND PERFORMANCE EFFECTS OF ALTERED SUBMARINE ATMOSPHERE.

...FUNCTIONS/EQUIPMENT/FACILITIES

LABORATORY FACILITIES FOR USE OF UP-TO-DATE EQUIPMENT AND INSTRUMENTS TO DO BASIC AND APPLIED RESEARCH, FACILITIES INCLUDE TWO-MAN RATED 300 AND 150 PSIG HYPERBARIC CHAMBERS. COMPLETE EXERCISE PHYSIOLOGY LAB INSTRUMENTATION SHIP, COMPUTER APPLICATIONS CENTER, TECHNICAL LIBRARY, GRAPHIC ARTS AND PHOTOGRAPHY SHOP, ANIMAL SCIENCES FACILITY, ANECHOIC CHAMBERS, PSYCHOACOUSTIC LAB. OPERATIONAL SONAR SIMULATION LABS; CELL CULTURE LAB, MASS SPECTROMETERS, GAS CHROMATOGRAPHS.

INSTALLATION: SURFACE WEAPONS CENTER

DAHLGREN, VIRGINIA

CDR: CAPT R. P. FUSCALDO

TECH DIRECTOR: DR. LEMMUEL L. HILL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	335.086	327.100
TOTAL PROCUREMENT	207.675	219.507
TOTAL O&M	98.263	91.687
TOTAL OTHER	24.789	18.006
TOTAL ANNUAL LAB	665.813	656.300
TOTAL INHOUSE	315.579	296.422
TOTAL INHOUSE RDTE	167.755	159.463
ANNUAL OPERATING COST	97.437	108.982

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL FHDS	TOTAL PROF	NON- PROF
MILITARY	116	0	39	77
CIVILIAN	5141	230	2565	2576
TOTAL	5257	230	2604	2653

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4084	1616.610	304.521	1176.514	3097.645	136.100	295.241

...MISSION

THE PRINCIPAL NAVY RESEARCH, DEVELOPMENT, TEST AND EVALUATION CENTER FOR SURFACE SHIP WEAPONS SYSTEMS, ORDNANCE, MINES AND STRATEGIC SYSTEMS SUPPORT.

...CURRENT IMPORTANT PROGRAMS

STRATEGIC SYSTEMS-TRIDENT, REENTRY SYSTEMS MATERIALS, TARGETING, COMBAT SYSTEMS-AEGIS, TOMAHAWK WEAPON SYSTEMS-GUN, SM-2, GUIDED PROJECTILES UNDERWATER SYSTEMS-MINES, TORPEDO WARHEADS, ASW SYSTEMS ELECTRONIC SYSTEMS-EW SYSTEMS, EM EFFECTS, AEGIS RADAR, SEARCH & TRACK.

...FUNCTIONS/EQUIPMENT/FACILITIES

FACILITIES INCLUDE WIND TUNNELS UP TO MACH 18, 1.75 MILLION GALLON HYDROBALLISTIC TANK, MAGNETIC SILENCING FACILITY, FBM DISPAC PRODUCTION FACILITY. FACILITIES FOR ASSURANCE OF COMPUTER PROGRAMS FOR STRATEGIC AND TACTICAL MISSILES, INTELLIGENCE PROCESSING SYSTEMS, GUN AND MISSILE RANGE INCLUDING LAND-BASED DEVELOPMENT SITES FOR WEAPON CONTROL SYSTEMS. ELECTROMAGNETIC EFFECTS FACILITIES FOR NUCLEAR AND NON-NUCLEAR EFFECTS. FACILITIES FOR WARHEAD CHARACTERIZATION AND DAMAGE TO TARGETS. DEVELOPMENT AND TEST FACILITIES FOR LASER AND ELECTRO-OPTICS SUBSYSTEMS, DEEP WATER OFFSHORE FACILITIES FOR MINE SYS, MOBILE TACTICAL WARGAMES FAC, EXPLOSIVE MATERIALS AND MARINE CORPS SUPPORT FACILITIES, CHEMISTRY, PLASTICS AND METALLURGY LABS.

INSTALLATION: UNDERSEA RANGES DEPARTMENT

NEWPORT, RI

CO: CAPT M. P. FIORI, USN

TECH DIRECTOR: MR. EARL MESSERE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	44.615	38.753
TOTAL PROCUREMENT	0.883	0.690
TOTAL O&M	11.868	14.667
TOTAL OTHER	2.232	2.330
TOTAL ANNUAL LAB	59.598	56.440
TOTAL INHOUSE	6.541	10.812
TOTAL INHOUSE RDTE	2.819	6.625
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	18	0	16	2
CIVILIAN	3	0	3	0
TOTAL	21	0	19	2

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
594	86.628	18.826	337.756	443.210	35.897	0.000

...MISSION
TO PROVIDE DEEP WATER DEV AND OPRTNL T&E FACLTYS FOR U/W ACOUSTIC MEASUREMENTS, TESTING, AND CALBRTN SONARS, PROVIDE ACCURATE U/W, SURFACE AND IN-AIR TRACKING DATA ON SHIPS, SUB, AIRCRAFT AND WEAPON SYSTEMS.

...CURRENT IMPORTANT PROGRAMS
R&D TESSTS/MK48ADCAP/LAMPS/CULZASW HELO/WAA/SSTD/SSN21/SEALANCE/
SQS53C/ASW FCS/MK116/TOWED ARRAY/FMS.
CERTIFICATIN/TORP MK48 TRAINING CERT PROG/CSSQT/WSAT/CART/AIREM/
SPCL ACOUSTIC TRAILS.
FLEET TRAINING/MK48 PROFICIENCY/AIR TORPEX/PCO/OTHT/ASW REFTRA.

...FUNCTIONS/EQUIPMENT/FACILITIES
HIGHLY ADVANCED AND INSTRUMENTED ASW WEAPONS, SONAR, AND FORACS TEST MEASUREMENT RANGES IN SUPPORT OF NAVY ASW AND UNDERSEA R&D PROGRAMS, AND ASW FLEET ASSESSMENT AND OPERATIONAL READINESS.

INSTALLATION: UNDERWATER SYSTEMS CENTER

NEWPORT, RI

CO: CAPT M.P. FIORI

TECH DIRECTOR: MR. EARL MESSERE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	233.597	222.629
TOTAL PROCUREMENT	183.729	202.172
TOTAL O&M	103.866	109.585
TOTAL OTHER	1.613	2.145
TOTAL ANNUAL LAB	522.005	536.531
TOTAL INHOUSE	254.247	255.563
TOTAL INHOUSE RDTE	138.350	134.962
ANNUAL OPERATING COST	75.773	88.968

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	73	2	69	4
CIVILIAN	3520	114	2341	1179
TOTAL	3593	116	2410	1183

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
370	1162.833	203.746	544.099	1910.678	59.166	118.903

...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CTR FOR SUBMARINE WARFARE AND SUBMARINE WEAPON SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

ADVANCED TECHNOLOGY IN U/W ACOUSTICS, INFO PROCESSING, WEAPONRY.
DESIGN, DEVELOPMENT & EVALUATION U/W COMBAT SUB SYSTEMS INCNG SUBACS & SURF SHIP SONAR. RDT&E FOR OVERALL U/W COMBAT (TRIDENT, 688, ETC).
INTRODUCE TO FLT AND IN-SERV ENGINEERING OF MK48 & DEV OF MK48 ADCAP.
DESIGN, DEV&EVAL OF LAUNCHERS, U/W TARGET SYS & MOBILE/FIXD U/W TEST RANGES

...FUNCTIONS/EQUIPMENT/FACILITIES

PRIMARY IN-HSE R&D CAPABILITY FOR NAVY U/W COMBAT SYSTEMS SUBSYSTEMS AND TECH FOR SONAR SYSTEMS (HULL-TOWD/SUB COMCTNS SYSTEMS INTEGRTN/SUB ANTNA SYSTEMS). U/W WPN RANGE TECHNLOGY/READINESS OF IN-SVC SHIPBOARD U/W SYSTEMS/ASW SUP. TORPEDO TEST RANGES (FIXD/PORTBLE) SHLOW AND DP WTR ASW WPN FIRE CTRL R&D FACILITY. ASW WPN LAUNCHING DEVICE R&D FACILITY, QLTY ENG, EVAL&RELIABILITY LAB. BERMUDA RSCH FACLT, TORPEDO PROPULSN TEST FACLT, ELECTNGNTC FACLT, SYS CRTFCTN AND INTGRTN FACLT, ACOUSTC MSMNT & XDUCER R&E FACLT, TORPDO TEST RANGE. INSTMNT SHELTER, ACOUSTC RANGE AUTEC.

INSTALLATION: WEAPONS CENTER

CHINA LAKE, CA

CDR: CAPT J. A. BURT

TECH DIRECTOR: G. R. SCHIEFER

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	386.838	370.769
TOTAL PROCUREMENT	213.279	239.837
TOTAL O&M	70.350	78.114
TOTAL OTHER	44.061	46.240
TOTAL ANNUAL LAB	714.528	734.960
TOTAL INHOUSE	349.070	353.235
TOTAL INHOUSE RDTE	192.334	197.265
ANNUAL OPERATING COST	94.305	103.366

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	496	0	33	463
CIVILIAN	5100	145	1833	3267
TOTAL	5596	145	1866	3730

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
1127266	2956.624 212.075 2861.210 6029.909	285.722 165.981

...MISSION

THE PRINCIPAL NAVY RDT&E CENTER FOR AIR WARFARE SYSTEMS (EXCEPT ANTI-SUBMARINE WARFARE SYSTEMS) AND MISSILE WEAPON SYSTEMS, AND THE NATIONAL RANGE/FACILITY FOR PARACHUTE TEST AND EVALUATION.

...CURRENT IMPORTANT PROGRAMS

ANTI-AIR MISSILES: SIDEWINDER, OUTER-AIR-BTL MSL, SPARROW, RAM, PHOENIX
ANTISURFACE WEAPONS: HARM, SIDEARM, HARPOON, TOMAHAWK, SKIPPER, BIGEYE
ELECTRONIC WARFARE: ALR-67, HARM LCS, ERASE, FOLPEN, ECHO RANGE, TACTICS
TACTICAL A/C SYS: A-6, A-7, AV-8, F/A-18, AH-1, TARGETING, ESCAPE SYS
TECHNOLOGY BASE: E-O/LASER, PROPULSION/WARHEAD, GUIDANCE/FUZING, MAT'LS

...FUNCTIONS/EQUIPMENT/FACILITIES

CONDUCT RESEARCH, ESTABLISH AND MAINTAIN PRIMARY RDT&E SUPPORT FOR NAVY, MARINE CORPS, AND JOINT-SERVICE PRODUCTS SUCH AS ANTI-AIR MSLS, ANTISURFACE WPNS, DEFENSE-PENETRATION SYSTEMS, AND INTEGRATED TACTICAL A/C SYSTEMS. FACILITIES INCLUDE MICHELSON LAB, LAURITSEN LAB, EW THREAT ENVIRONMENT SIMULATION FACILITY (ECHO RANGE), SOLID-STATE LAB, ENCOUNTER SIMULATION LAB, PROPULSION RESEARCH LAB, MICROELECTRONICS FACILITY, EXPLOSIVES R&D FACILITY, GROUND & AIR RANGES, MILITARY TARGETS RANGE, ARMITAGE FIELD, PARACHUTE TEST FACILITIES, SUPERSONIC TEST TRACKS, MICROWAVE ANECHOIC FACILITIES, RF & IR/E-O HARDWARE-IN-THE-LOOP SIMULATIONS, LASER/OPTICS/E-O LABS, WPNS AND TACTICS ANALYSIS CENTER, A/C-WPNS SURVIV. LAB, A/C INTEGRATION/SIMULATION FACILITIES, STRATEGIC SYSTEMS T&E FACILITY, AND RADAR CROSS-SECTION FACILITY.

INSTALLATION: WEAPONS EVALUATION FACILITY**ALBUQUERQUE, NM****CO: CAPT LEROY FARR****TECH DIRECTOR: S. R. RANDALL****PROGRAM DATA BY FISCAL YEAR (MILLIONS)**

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	4.634	6.057
TOTAL PROCUREMENT	2.039	2.100
TOTAL O&M	3.778	3.891
TOTAL OTHER	5.889	6.066
TOTAL ANNUAL LAB	16.340	18.114
TOTAL INHOUSE	10.804	12.412
TOTAL INHOUSE RDTE	4.030	5.435
ANNUAL OPERATING COST	2.325	2.395

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	109	0	40	69
CIVILIAN	132	0	39	93
TOTAL	241	0	79	162

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
977	23.000 34.000 99.000 156.000	0.000 2.611

...MISSION

MISSION: CONDUCT THE NAVY NUCLEAR WEAPONS SYSTEM SAFETY PROGRAM. CONDUCT TEST AND EVALUATION PROJECTS ON NUCLEAR AND SELECTED NON-NUCLEAR WEAPONS. PERFORM NUCLEAR CERTIFICATION TRIALS INCLUDING NUCLEAR INSURV.

...CURRENT IMPORTANT PROGRAMS

PROGRAMS: ONGOING NUCLEAR SAFETY PROGRAM ON ALL NAVY NUCLEAR WEAPONS SYSTEMS, DEVELOPMENT SUPPORT FOR SUCH PROGRAMS AS F/A-18A, ASW STANDOFF WEAPON, A NEW DEPTH STRIKE BOMB, AND THE TRIDENT D5, MAINTENANCE OF OVER 500 LOADING MANUALS AND CHECKLISTS.

...FUNCTIONS/EQUIPMENT/FACILITIES

FUNCTIONS: CONDUCT NAVY NUCLEAR WEAPON SYSTEM SAFETY PROGRAM. CONDUCT CERTIFICATION AND COMPATIBILITY TRIALS ON AIR-LAUNCHED NUCLEAR WEAPON SYSTEMS. SUPPORT THE DESIGN, DEVELOPMENT, TEST, AND EVALUATION OF NEW NUCLEAR WEAPON SYSTEMS. SUPPORT NAVY NUCLEAR SURVIVABILITY PROGRAMS. DEVELOP, VERIFY AND MAINTAIN CONVENTIONAL AND NUCLEAR WEAPON LOADING MANUALS AND CHECKLISTS FOR ALL NAVY AIRCRAFT.

CAPABILITIES: FLIGHT TEST UTILIZING 3 A-7 AIRCRAFT, EXTENSIVE AIRCRAFT INSTRUMENTATION, TELEMETRY AND DATA REDUCTION. IN-HOUSE COMPUTER FACILITIES AND ACCESS TO EXTENSIVE KIRTLAND AFB COMPUTER RESOURCES. ACCESS TO WHITE SANDS MISSILE RANGE AND THE SANDIA AND LOS ALAMOS NATIONAL LABORATORIES, ACCESS TO HPC AND VPD EMP TEST FACILITIES.

INSTALLATION: AERO PROPULSION LABORATORY

WPAFB, OH

DIR: COL JAMES L. RADLOFF

CHIEF SCIENTIST: DR. EDWARD T. CURRAN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	141.127	163.113
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.720	1.791
TOTAL ANNUAL LAB	142.847	164.904
TOTAL INHOUSE	20.234	20.625
TOTAL INHOUSE RDTE	20.234	20.625
ANNUAL OPERATING COST	3.379	3.520

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	56	6	48	8
CIVILIAN	319	31	234	85
TOTAL	375	37	282	93

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
41	283.893	20.770	349.510	654.173	83.357	23.060

...MISSION

PLAN AND EXECUTE RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT PROGRAMS IN AIR-BREATHING PROPULSION, AEROSPACE POWER, FUELS AND LUBRICATION AND AIRCRAFT FIRE PROTECTION TECHNOLOGY. CONDUCT CONTRACT AND IN-HOUSE PROGRAMS. PROVIDE OPERATIONAL AND SYSTEM SUPPORT.

...CURRENT IMPORTANT PROGRAMS

ADVANCED TURBINE ENGINE GAS GENERATORS (ATEGG) TECHNOLOGY
 INTEGRATED HIGH PERFORMANCE TURBINE ENGINE TECHNOLOGY
 HIGH MACH NUMBER PROPULSION SYSTEM TECHNOLOGY
 POWER TECHNOLOGY FOR MILITARY SPACECRAFT
 PROPULSION TECHNOLOGY FOR AIR-LAUNCHED MISSILES

...FUNCTIONS/EQUIPMENT/FACILITIES

PROPELLER TEST FACILITY, HELICOPTER ROTOR TEST FACILITY, BATTERY LAB
 PHOTOVOLTAIC LAB, THERMAL LAB, FLUID POWER LAB, HIGH SPEED DRIVE STAND
 SUPERCONDUCTIVITY RESEARCH LAB, HIGH POWER LAB, AIRCRAFT ELECTRICAL
 POWER LAB, PLASMA PHYSICS LAB, OPTICAL DIAGNOSTICS LAB, RAMJET ENGINE
 TEST FACILITY, RAMJET COMBUSTION RESEARCH FACILITY, RAMJET COMBUSTOR
 FLOW VISUALIZATION FACILITY, FUELS RESEARCH FACILITY, LUBRICATION
 RESEARCH FACILITY, FUEL TANK FARM, COMPRESSOR RESEARCH FACILITY (CRF),
 CRF STRUCTURES LAB, CRF COMPONENT TEST LAB, INNOVATIVE STRUCTURES
 RESEARCH LAB, TURBINE RESEARCH LAB, HEAT TRANSFER RESEARCH, CONTROL
 SYSTEMS RESEARCH, SCRAMJET ENGINE TESTING (PLANNED), FUEL COMBUSTION
 RESEARCH & DIAGNOSTICS, FUEL SPRAY RESEARCH, (PLANNED), AIRCRAFT FUEL
 SYSTEM SIMULATION, FUEL HYDROGENATION.

INSTALLATION: AEROSPACE MEDICAL RESEARCH LAB

WPAFB, OH

CDR: COL CHARLES P. HATSELL

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	39.213	29.571
TOTAL PROCUREMENT	0.038	0.000
TOTAL O&M	3.047	1.325
TOTAL OTHER	0.769	0.239
TOTAL ANNUAL LAB	43.067	31.135
TOTAL INHOUSE	24.472	18.588
TOTAL INHOUSE RDTE	22.498	18.043
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	120	13	66	54
CIVILIAN	156	32	105	51
TOTAL	276	45	171	105

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
30	129.721	66.855	33.392	229.968	22.900	40.412	

...MISSION

ACCOMPLISH BEHAVIORAL AND BIOMEDICAL RESEARCH AND DEVELOPMENT TO DEFINE HUMAN TOLERANCE AND DEGRADATION OF HUMAN PERFORMANCE UNDER THE CONDITION OF ENVIRONMENTAL STRESS ASSOCIATED WITH AEROSPACE OPERATIONS AND PROVIDE SUPPORT TO SYSTEM DEVELOPMENT IN THE ABOVE AREAS.

...CURRENT IMPORTANT PROGRAMS

OPERATOR COMMAND CONTROL AND COMMUNICATIONS TECHNOLOGY. CREW SYSTEMS AUTOMATION TECHNOLOGY. ADVANCED ESCAPE TECHNOLOGY. HUMAN COUNTERMEASURES TECHNOLOGY. ENVIRONMENTAL HEALTH PROTECTION. MAN-IN-SPACE ALTERNATIVES TECHNOLOGY. CHEMICAL DEFENSE TECHNOLOGY.

...FUNCTIONS/EQUIPMENT/FACILITIES

HUMAN DECELERATION SYSTEM TO SIMULATE THE COMPLEX ACCELERATION ENVIRNMNT ASSOCIATED WITH EJECTION AND CRASH LANDING.DYNAMIC ENVIRONMENT SIMULATOR A SIX DEGREE OF FREEDOM MAN-RATED CENTRIFUGE USED TO SIMULATE SUSTAINED ACCELERATIONS SUCH AS THOSE ENCOUNTERED IN AIR COMBAT MANEUVERING.THOMAS DOMES-EIGHT ALTITUDE EXPOSURE CHAMBERS TO SIMULATE EXOTIC ARTIFICIAL ATMOSPHERIC CONDITIONS. STRATEGIC AND TACTICAL COCKPIT SIMULATION FACILITY USED TO PERFORM REAL-TIME MAN-IN-THE-LOOP EXPERIMENTS. ANECHOIC AND REVERBERATION CHAMBERS TO ENABLE EXPERIMENTAL INVESTIGATIONS OF POTENTIALLY HAZARDOUS NOISE TO DETERMINE EFFECTS ON BODY FUNCTION AND PERFORMANCE. VIVARIUM-LABORATORY RESEARCH ANIMAL FACILITY.

INSTALLATION: ARMAMENT DIVISION

EGLIN AFB, FL

CDR: COL DAVID R. STRUNK

TECH DIRECTOR: MR. GEORGE F. KIRBY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	386.541	369.579
TOTAL PROCUREMENT	1300.749	1343.853
TOTAL O&M	71.426	69.625
TOTAL OTHER	245.822	245.822
TOTAL ANNUAL LAB	2004.538	2028.879
TOTAL INHOUSE	206.828	227.133
TOTAL INHOUSE RDTE	140.283	158.919
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	3056	13	2801	255
CIVILIAN	1663	7	845	818
TOTAL	4719	20	3646	1073

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE LAB	(THOUSANDS ADMIN	OF SQUARE OTHER	FEET)	TOTAL	REAL PROP
456766	243.039	753.527	9734.282	10730.848	346.532	534.381

...MISSION

AD LEAD ORG FOR DEV PLANNING. FOSTERS INNOVATION THROUGH LONG RANGE PLANNING AND THE APPLICATION OF EMERGING TECHNOLOGY. CONDUCTS ANALYSIS TECHNOLOGY. CONDUCTS ANALYSIS TO DETERMINE PREFERRED CONFIGURATIONS & SYSTEMS APPROCHES AND TO DIRECT TECH DEV. THE NON-NUCLEAR ARMAMENT PLAN & THE MISSION AREA PLANNING STRUCTURE INSURES LONG TERM PLANNING.

...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT PLANNING
SMALL BUSINESS INNOVATIVE RESEARCH
FOREIGN WEAPON EVALUATION
NATO COOPERATIVE TEST

...FUNCTIONS/EQUIPMENT/FACILITIES

SCIENTIFIC/ENGINEERING PERSONNEL & LABORATORY FACILITIES CAPABLE OF EXPL, AD & ENGR DEVELOPMENT OF NON-NUCLEAR MUNITIONS & EQUIPMENT. ARMAMENT SYSTEMS TEST ENVIRONMENT COVERING 725 SQ MILES WITH LARGE ADJACENT WATER AREAS, FOR EXAMPLE: 28 TEST AREAS WITH INSTRUMENTED FACILITIES INCLUDING PRECISION TRACKING RADARS & PHOTO-OPTICS USED FOR MUNITION TESTING & ELECTROMAGNTIC TESTING ENVIRONMENT; INSTRUMENTED COMPLEX OF THREAT SYSTEMS FOR EVALUATING WEAPONS SYSTEMS EFFECTIVENESS; A REALISTIC ENVIRONMENT FOR TESTING A WEAPON SYSTEM AGAINST AN ACTIVE DEFENSE SYSTEM; A CLIMATIC LABORATORY CAPABLE OF TESTING COMPLETE WEAPON SYSTEMS; A COMPUTER SCIENCE LAB; A PHYSICAL LAB; A PHOTO LAB; AN INSTRUMENT R&D FACILITY; AND A MISSILE SIMULATION & TEST LABORATORY.

INSTALLATION: ARMAMENT LABORATORY (AFSC)

EGLIN AFB, FL

CDR: COL PETER J. MARCHIANDO

CHIEF SCIENTIST: DR. SAMUEL C. LAMBERT

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	114.953	142.284
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	114.953	142.284
TOTAL INHOUSE	67.429	83.700
TOTAL INHOUSE RDTE	67.429	83.700
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	112	3	73	39
CIVILIAN	380	14	269	111
TOTAL	492	17	342	150

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	157.096	85.138	29.683	271.917	0.000	26.844

...MISSION

AFATL IS SPECIFICALLY RESPONSIBLE FOR THE PLANNING, FORMULATION AND EXECUTION OF RESEARCH. EXPLORATORY AND ADVANCED DEVELOPMENT OF NON-NUCLEAR ARMAMENT AND RELATED EQUIPMENT AS WELL AS TECHNICAL SUPPORT FOR ARMAMENT SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

AUTONOMOUS SYNTHETIC APERTURE RADAR GUIDANCE TECHNOLOGY
INSENSITIVE MUNITIONS TECHNOLOGY
STRATEGIC DEFENSE INITIATIVE/KINETIC ENERGY WEAPONS AND LETHALITY
TACTICAL RADAR SEEKER
ADVANCED WEAPON DISPENSER TECHNOLOGY (HAVE SLICK)

...FUNCTIONS/EQUIPMENT/FACILITIES

MAJOR EQUIPMENT INVENTORY CONSISTS OF A VARIETY OF ANALYZERS. SIMULATOR MIXER EQUIPMENT, AND MEASUREMENT MACHINES SOME WITH RF, X-RAY AND LASER CHARACTERISTICS. AFATL FACILITIES INCLUDE 18 SEPARATE LABORATORIES AND FACILITIES FOR THE CONDUCT OF A WIDE RANGE OF SCIENTIFIC INVESTIGATIONS AND ANALYSIS; A RAPID RESPONSE MODEL FABRICATION SHOP; AND A TECHNICAL LIBRARY WHICH HAS A ON-LINE ACCESS TO SEVERAL DATA BANKS.

INSTALLATION: ARNOLD ENGINEERING DEVELOPMENT CENTER

ARNOLD AFB, TN

CDR: COL STEPHEN P. CONDON

CHIEF SCIENTIST: DR. D. C. DANIEL

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	229.385	240.396
TOTAL PROCUREMENT	3.971	3.285
TOTAL O&M	2.295	5.107
TOTAL OTHER	13.829	39.699
TOTAL ANNUAL LAB	249.480	288.487
TOTAL INHOUSE	67.042	84.611
TOTAL INHOUSE RDTE	59.494	72.119
ANNUAL OPERATING COST	57.357	0.000

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	146	4	74	72
CIVILIAN	240	5	109	131
TOTAL	386	9	183	203

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
39081	1471.500	190.922	845.554	2507.976	875.298	138.752

...MISSION

AS A NATIONAL TEST FACILITY, AEDC CONDUCTS TESTS, ENGINEERING ANALYSIS, AND TECHNICAL EVALUATIONS FOR RESEARCH, SYSTEM DEVELOPMENT, AND OPERATIONAL PROGRAMS OF THE AIR FORCE, DEPARTMENT OF DEFENSE, OTHER GOVERNMENTAL AGENCIES AND INDUSTRY.

...CURRENT IMPORTANT PROGRAMS

ADVANCED TACTICAL FIGHTER
PEACEKEEPER
SRAM II
F 15E
NATIONAL AEROSPACE PLANE

...FUNCTIONS/EQUIPMENT/FACILITIES

USING GROUND SIMULATION FACILITIES, THE CENTER SUPPORTS PROPULSION, AERODYNAMIC, REENTRY, TRANSATMOSPHERIC, AND SPACE-FLIGHT SYSTEMS TESTING; AEDC PERFORMS RESEARCH TO DEVELOP NEW TECHNOLOGY FOR ADVANCED TEST FACILITIES, TEST TECHNIQUES AND MEASUREMENT METHODOLOGIES ASSOCIATED WITH GROUND TESTING. INCLUDED ARE WIND TUNNELS WITH SECTIONS TO 16 FT AND SPEEDS FROM SUBSONIC TO MACH 20; TURBINE ENGINE TEST CELLS WHICH PROVIDE SIMULATION TO MACH 3, ROCKET TEST CELLS, THE LARGEST RATED AT .5 MILLION LBS THRUST AT ALTITUDE; SPACE CHAMBERS TO 42 FT DIAMETER AND 82 FT HIGH; HYPERBALLISTIC RANGES; DUST AND SNOW EROSION FACILITIES; BIRD IMPACT FACILITY; AND TWO CAPTIVE TRAJECTORY SYSTEMS.

INSTALLATION: ASTRONAUTICS LABORATORY

EDWARDS AFB, CA

DIR: COL JAMES R. NUNN

CHIEF SCIENTIST: DR. RICHARD WEISS

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	104.000	111.587
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	104.000	111.587
TOTAL INHOUSE	18.182	20.161
TOTAL INHOUSE RDTE	18.182	20.161
ANNUAL OPERATING COST	1.100	1.159

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	157	1	62	95
CIVILIAN	280	22	147	133
TOTAL	437	23	209	228

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
68345	422.986	86.848	4.780	514.614	148.219	34.506

...MISSION

CONDUCT THE AIR FORCE'S ROCKET PROPULSION AND INTERDISCIPLINARY SPACE TECHNOLOGY RESEARCH, EXPLORATORY, & ADV TECH DEVEL PROGRAMS FOR FUTURE ICBMS, AIR LAUNCHED MISSILES, SPACE VEHICLES, & SATELLITES. PROVIDES ROCKET PROPULSION TECHNOLOGICAL SUPPORT TO DOD AND NON-DOD AGENCIES.

...CURRENT IMPORTANT PROGRAMS

PROVIDE SOLID PROPULSION OPTIONS FOR ADVANCED BALLISTIC MISSILE SYSTEMS. PROVIDE LOW SIGNATURE, HIGH PERF, & LIGHTWEIGHT PROPULSION OPTIONS FOR TACTICAL MISSILES. PROVIDE LOW COST HIGH PERF PROPULSION OPTIONS FOR LAUNCH VEHICLES. PROVIDE HI PERF PROPULSION OPTIONS FOR SPACE SYS ORBIT TRANSFER. DEMO HIGHER PERF NON-CONVENTIONAL PROPULSION CONCEPTS.

...FUNCTIONS/EQUIPMENT/FACILITIES

LABS FOR SYNTHESIS, ANALYSIS, FORMULATION & EVAL OF NEW PROPELLANTS. FACILITIES FOR MIXING, CASTING, CURING, & TESTING SOLID ROCKET MOTORS & COMPONENTS. SOLID MOTOR EXPERIMENTAL COMPLEX FOR INVESTIGATION OF COMBUSTION, AGING, STRUCTURAL INTEGRITY, BALLISTIC PERFORMANCE & HIGH TEMP COMPONENTS. LAB FOR EXPERIMENTATION OF SMALL ATTITUDE CONTROL & SATELLITE PROPULSION SYS & COMPONENTS IN SIMULATED SPACE ENVIRONMENTS. ALTITUDE EXPERIMENTATION OF LIQUID, SOLAR, ELECTRIC, & SOLID ROCKETS UP TO 50,000 POUNDS THRUST. AMBIENT EXPERIMENTATION OF LIQUID OR SOLID ROCKETS UP TO 10,000,000 POUNDS THRUST. IN-HOUSE ANALYTICAL CAPABILITY FOR DESIGN, ANALYSIS, & DATA REDUCTION. SHOPS FOR FABRICATING EXPERIMENTAL HARDWARE SYSTEMS. CARBON-CARBON & FILAMENT WINDING LAB. HIGH ENERGY DENSITY MATTER LAB. SPACE STRUCTURE DYNAMICS LAB.

INSTALLATION: AVIONICS LABORATORY

WPAFB, OH

DIR: MR. MARVIN SPECTOR

CHIEF SCIENTIST: DR. JESSE C. RYLES

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	247.566	225.577
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	6.516	6.783
TOTAL ANNUAL LAB	254.082	232.360
TOTAL INHOUSE	28.446	30.552
TOTAL INHOUSE RDTE	28.446	30.552
ANNUAL OPERATING COST	4.718	5.064

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	142	5	108	34
CIVILIAN	539	29	408	131
TOTAL	681	34	516	165

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
200	238.012	14.715	409.889	662.616	78.212	67.645	

...MISSION

MAINTAINS AN AVIONICS TECHNOLOGY BASE THROUGH RESEARCH EXPLORATORY AND ADVANCED DEVELOPMENT AND ASSIGNED BASIC RESEARCH PROGRAMS. DEVELOPS AND DEMONSTRATES COST EFFECTIVE AVIONICS CONCEPTS TO REDUCE ACQUISITION AND OPERATING COSTS AND IMPROVE OPERATIONAL CAPABILITIES

...CURRENT IMPORTANT PROGRAMS

COMMON SIGNAL CONTROL PROCESSOR
INTEGRATED ELECTRONIC WARFARE SYSTEM
ULTRA RELIABLE RADAR
AUTOMATIC TARGET CLASSIFICATION

...FUNCTIONS/EQUIPMENT/FACILITIES

TECHNICAL AREAS INCLUDE: FIRE CONTROL, WEAPON DELIVERY, COMMUNICATIONS, ELECTRONIC WARFARE, NAVIGATION, SURVEILLANCE RECONNAISSANCE INFORMATION PROCESSING AND CONTROL SUBSYSTEMS, INTEGRATION AND SYSTEMS ARCHITECTURE. IN-HOUSE LABS INCLUDE SIMULATION AND ANALYSIS OF INTEGRATED DIGITAL SYSTEMS DESIGN, PERFORMANCE EVALUATION OF E-O SYSTEMS AND CORRELATION WITH WEATHER OBSERVATION, SIMULATION OF REAL-WORLD SIGNAL JAMMING ENVIRONMENT FOR EVALUATION OF ELECTRONIC WARFARE SYSTEMS, EVALUATION OF RECON SENSORS IN REALISTIC FLIGHT ENVIRONMENT. OTHER LABS ARE MAINTAINED FOR EVALUATION OF AIRBORNE AND SPACE SENSORS AND COMPONENTS FORM OPTICAL TO RADIO FREQUENCIES.

INSTALLATION: EASTERN SPACE AND MISSILE CENTER

PATRICK AIR FORCE BASE

CDR: COL LAWRENCE L. GOOCH

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	0.000	0.000
TOTAL PROCUREMENT	46.017	27.171
TOTAL O&M	300.526	291.761
TOTAL OTHER	47.819	68.731
TOTAL ANNUAL LAB	394.362	387.663
TOTAL INHOUSE	36.592	36.114
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	28.141	26.013

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1050	1	159	891
CIVILIAN	1119	1	43	1076
TOTAL	2169	2	202	1967

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
26138	212.871	1179.313	4864.445	6256.629	384.300	426.600

...MISSION

SUPPORT OF GROUND- AND SEA-LAUNCHED SPACE AND MISSILE SYSTEMS FROM CCAFS AND KSC. OPERATION OF INSTRUMENTED SHIP IN SUPPORT OF REQUIREMENTS. SUPPORT OF USAF SPACETRACK, SPECIAL PROJECTS, DOCUMENTED R&D TESTS, AND VARIOUS TENANT ACTIVITIES.

...CURRENT IMPORTANT PROGRAMS

AIR FORCE PROGRAMS: TITAN, ATLAS/CENTAUR, DELTA, DOD SHUTTLE
NAVY: POSEIDON, TRIDENT, UK POLARIS
NASA PROGRAMS: SPACE SHUTTLE

...FUNCTIONS/EQUIPMENT/FACILITIES

CAPABILITIES INCLUDE; ASSEMBLY, PRELAUNCH CHECKOUT, AND LAUNCH PERFORMANCE EVALUATION OF BALLISTIC MISSILES, SPACE LAUNCH VEHICLES, AND PAYLOADS. SERVICES INCLUDE TRACKING, LONG DISTANCE COMMUNICATIONS AND DATA REDUCTION ANALYSIS. EQUIPMENT AND FACILITIES INCLUDE; CCAFS LAUNCH SUPT, MAINLAND AND DOWN RANGE INSTRUMENTATION AND COMMUNICATIONS, INSTRUMENTED SHIP, DATA PROCESSING, PHOTO/ELECTRO-OPTICAL SERVICES, AND RANGE TIMING SYSTEMS. ESMC OPERATES AND MAINTAINS CCAFS, MAINLAND SITES AND DOWNRANGE STATIONS. SUPPORT FUNCTIONS INCLUDE: CONTRACTOR OPERATION, PLANT ENGINEERING, LARS, AND OTHERS SPECIAL SERVICES.

INSTALLATION: ENGINEERING AND SERVICES LABORATORY

TYNDALL AFB, FL.

CDR: COL KENNINGTON

LAB DIRECTOR: COL HOKANSON

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	19.030	12.923
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	11.983	1.790
TOTAL OTHER	3.751	3.918
TOTAL ANNUAL LAB	34.764	18.631
TOTAL INHOUSE	3.585	4.825
TOTAL INHOUSE RDTE	2.702	3.835
ANNUAL OPERATING COST	0.571	0.594

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	67	6	50	17
CIVILIAN	35	8	49	0
TOTAL	102	14	99	3

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
0	55.460	29.141	14.149	98.750	5.770	3.517	

...MISSION

ESL, HQ AFESC, IS THE LEAD AGENCY FOR RESEARCH, DEVELOPMENT, TEST, AND EVALUATION IN THE AREAS OF CIVIL AND ENVIRONMENTAL ENGINEERING. IN ADDITION, THE LABORATORY HAS BEEN DESIGNATED AS THE FOCAL POINT FOR ENVIRONMENTAL QUALITY AND LEAD LAB FOR FACILITIES ENERGY.

...CURRENT IMPORTANT PROGRAMS

HAZARDOUS WASTES CLEANUP AND CONTROL
AIR FORCE FUEL CONTAMINANTS
FACILITIES SURVIVABILITY
WEAPONS SYSTEMS PLATFORM PERFORMANCE (PAVEMENTS)
FIRE PROTECTION AND RECOVERY

...FUNCTIONS/EQUIPMENT/FACILITIES

FACILITIES: ENVIRONMENTAL QUALITY LABORATORY-EXPLORATORY DEVELOPMENT OF NEW CONCEPTS TO ELIMINATE OR SUBSTANTIALLY REDUCE ENVIRONMENTAL CONSEQUENCES OF FUTURE AIR FORCE WEAPON SYSTEMS; AIRFIELD SOILS AND SURFACES EVALUATION TRACK-TESTS CHEMICAL EFFECTS ON RUNWAY SURFACES; BOMB CRATER TEST FACILITIES-EVALUATE DIFFERENT BOMB CRATER FILLING TECHNIQUES; STRUCTURES EXPLOSIVE TEST SITE-EVALUATE AND IMPROVE NATO BLDG CRITERIA; FIRE-TEST FACILITY-IMPROVE FIRE DETECTION/SUPPRESSION FOR HARDENED AIRCRAFT SHELTERS; AND ENGINEERING SERVICES LAB-CONDUCT CIVIL ENGINEERING RESEARCH. EQUIPMENT: CENTRIFUGE-FOR SUBSCALE TESTING; MASS SPECTROMETER FOR POLLUTANT ANALYSIS; AND LOAD CART-FOR TESTING AIRCRAFT LANDING EFFECTS ON RUNWAY PAVEMENTS.

INSTALLATION: FLIGHT DYNAMICS LABORATORY

WPAFB, OH

DIR: COL THADDEUS H. SANDFORD

CHIEF SCIENTIST: DR. JAMES J. OLSEN

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	156.245	150.277
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.076	0.080
TOTAL OTHER	6.835	7.115
TOTAL ANNUAL LAB	163.156	157.472
TOTAL INHOUSE	32.248	30.591
TOTAL INHOUSE RDTE	32.172	30.511
ANNUAL OPERATING COST	4.324	4.156

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	165	4	112	53
CIVILIAN	595	34	428	167
TOTAL	760	38	540	220

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
76	368.868	204.174	94.319	667.361	51.211	26.135

...MISSION

PLANS, FORMULATES, AND EXECUTES TECHNOLOGY PROGRAMS FOR AEROSPACE FLIGHT VEHICLES IN STRUCTURES, AERODYNAMICS, FLIGHT CONTROL, AND VEHICLE SUB-SYSTEMS/EQUIPMENT. PROGRAMS COVER BASIC RESEARCH AND EXPLORATORY, ADVANCED AND ENGINEERING DEVELOPMENT, AS WELL AS TECHNOLOGY INTEGRATION.

...CURRENT IMPORTANT PROGRAMS

ADVANCED FIGHTER TECHNOLOGY INTEGRATION (F-16)
FORWARD SWEEP WING TECHNOLOGY DEMONSTRATOR (X-29)
SHORT TAKE-OFF AND LANDING (STOL) TECHNOLOGY DEMONSTRATOR
ADVANCED COMPOSITES AND METALLIC STRUCTURES
COMPUTATIONAL FLUID DYNAMICS

...FUNCTIONS/EQUIPMENT/FACILITIES

THE SUBSONIC AERODYNAMIC RESEARCH LABORATORY IS AN OPEN-CIRCUIT WIND TUNNEL WITH A MAXIMUM SECTION VELOCITY OF M=0.6. THE FULL-SCALE STATIC, THERMAL AND FATIGUE TEST LAB CAN CONDUCT SINGLE OR COMBINED TESTS ON SEVERAL AIRCRAFT SIMULTANEOUSLY. THE LANDING GEAR TEST FACILITY HAS DYNAMOMETERS AND OTHER SPECIAL EQUIPMENT FOR TESTING TIRES, BRAKES, AND LANDING GEAR STRUTS. THE FLIGHT CONTROL DEVELOPMENT LAB CAN EVALUATE ADVANCED CONTROL CONCEPTS IN A MISSION ENVIRONMENT USING SIMULATORS AND OTHER LABS FOR CREW SYSTEM DESIGN AND ACTION SYSTEM TESTS. THE TRISONIC GAS DYNAMIC FACILITY CAN OPERATE AT SUBSONIC, TRANSONIC, AND SUPERSONIC SPEEDS. THE VERTICAL WIND TUNNEL CAN PERFORM SPIN TESTS AND ALSO EVALUATE THE DYNAMIC BEHAVIOR OF FREE-FALL OBJECTS AND PARACHUTES.

INSTALLATION: FLIGHT TEST CENTER

EDWARDS AFB, CA

CDR: MG J. P. SCHOEPPNER, JR

TECH DIRECTOR: R. R. HILDEBRAND

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	405.299	449.838
TOTAL PROCUREMENT	11.536	9.528
TOTAL O&M	26.372	36.349
TOTAL OTHER	118.391	113.283
TOTAL ANNUAL LAB	561.598	608.998
TOTAL INHOUSE	157.402	176.054
TOTAL INHOUSE RDTE	123.773	139.654
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	3471	38	706	2765
CIVILIAN	2134	9	563	1571
TOTAL	5605	47	1269	4336

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
297438	192.293	301.174	8097.109	8590.576	446.824	256.144

...MISSION

THE MISSION OF THE FLIGHT TEST CENTER IS TO CONDUCT AERODYNAMIC TESTING OF MANNED AND UNMANNED AEROSPACE VEHICLES AS WELL AS AIRCRAFT SUBSYSTEMS. AFTTC OPERATED THE USAF TEST PILOT SCHOOL, EDWARDS AND UTAH TEST RANGES.

...CURRENT IMPORTANT PROGRAMS

B-1B DT&E/OT&E

TACTICAL SYSTEM UPGRADES: F-16 MSIP/LANTIRN, F-15E, YA-7F

STRATEGIC SYSTEM UPGRADES

COMBAT TALON II

TECHNOLOGY: SPACE SHUTTLE, X-29, AFTI F-16, AFTI F-111

...FUNCTIONS/EQUIPMENT/FACILITIES

SOME OF THE MAJOR UNIQUE FACILITIES AND EQUIPMENT ARE THE INTEGRATION FACILITY FOR AVIONICS SYSTEMS TEST (IFAST), REAL TIME MISSION CONTROL FACILITY, PRECISION IMPACT RANGE USED FOR BOMBING/GUNNERY/INFRARED INTEGRATION TESTING, CARGO AND PERSONNEL PARACHUTE DROP ZONES, HYDRANT REFUELING SYSTEM FOR HEAVY AIRCRAFT, WEIGHT AND BALANCE FACILITY, LARGEST AIRCRAFT LANDING AREA IN THE FREE WORLD, INTEGRATED MAINTENANCE FACILITY COMPLEX, R-2508 AIRSPACE, PHOTO/VIDEO LAB FOR AIRBORNE AND GROUND TESTING SUPPORT INTERMEDIATE AIRCRAFT AVIONICS, PACER COMMET JET ENGINE TEST FACILITY, HORIZONTAL AIRCRAFT STAND, AND DATA ACQUISITION SYSTEMS.

INSTALLATION: FRANK J. SEILER RESEARCH LABORATORY

USAFA, COLO SPGS, CO

CDR: LTC W. G. THORPE

CHIEF SCIENTIST: LTC K. E. SIEGENTHALER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	1.512	1.334
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.386	1.443
TOTAL ANNUAL LAB	2.898	2.777
TOTAL INHOUSE	1.412	1.234
TOTAL INHOUSE RDTE	1.412	1.234
ANNUAL OPERATING COST	0.267	0.241

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	23	15	19	4
CIVILIAN	9	1	2	7
TOTAL	32	16	21	11

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
0	16.956	1.849	0.000	18.805		1.923	3.487

...MISSION

CONDUCT BASIC RESEARCH IN LASERS, AEROMECHANICS AND CHEMISTRY.
ENCOURAGE AND SUPPORT USAFA FACULTY AND CADET RESEARCH BY DIRECT
PARTICIPATION. SPONSOR INDEPENDENT FACULTY RESEARCH.

...CURRENT IMPORTANT PROGRAMS

PHYSICAL CHEMISTRY AND ELECTROCHEMISTRY OF MOLTEN SALTS.
UNSTEADY AERODYNAMICS AND LARGE SPACE STRUCTURES.
ENERGETIC MATERIALS, SYNTHESIS AND DECOMPOSITION MECHANISMS.
THEORETICAL CHEMICAL CALCULATIONS.
LASERS (NONLINER OPTICS, KINETICS).

...FUNCTIONS/EQUIPMENT/FACILITIES

MOLTEN SALT MELT STRUCTURE, CONDUCTIVITY AND ELECTRODE REACTIONS,
EXPLOSIVE & PROPELLANT SYNTH, DECOMP MECH & DETONATION PHENOMENA. MSMT,
GENERATION, SPECTROSCOPY & MO CALCULATIONS OF MOLECULAR SPECIES. FTIR,
UV, FT-AND SUPERCON-NMR, MASS SPEC, CHROMATOGRAPHS, ELEC MICROSCOPE,
SPECIAL SPECTROMETERS & CONDUCTIVITY EQUIP. FULL WET LAB. LASER
LABORATORIES FOR NONLINER OPTICS AND KINETICS EXPERIMENTS. SUBSONIC
WIND TUNNEL AND DATA COLLECTION EQUIP, INCLUDING MASSCOMP FOR UNSTEADY
AERODYNAMICS RESEARCH. PRESSURE, HOT WIRE AND FLOW VISUALIZATION
CAPABILITIES AND ASSOCIATED INSTRUMENTATION FOR WIND TUNNEL EXPERIMENTS.

INSTALLATION: GEOPHYSICS LABORATORY

BEDFORD, MA

CDR: COL J. R. KIDD

CH SCI DIR:

DR. RICHARD HENDL

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	98.916	104.527
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	5.249	5.459
TOTAL ANNUAL LAB	104.165	109.986
TOTAL INHOUSE	32.617	29.732
TOTAL INHOUSE RDTE	31.586	28.660
ANNUAL OPERATING COST	8.832	9.185

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	117	3	43	74
CIVILIAN	447	97	262	185
TOTAL	564	100	305	259

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLIONS \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
336	395.732 14.821 25.883 436.436	12.350 45.066

...MISSION

CONDUCTS AND SUPPORTS AF RELEVANT RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT IN ENVIRONMENTAL AND PHYSICAL SCIENCES WITH MAJOR EMPHASIS ON GEOPHYSICS AND INTERACTIONS BETWEEN SYSTEMS AND THEIR ENVIRONMENT. ALSO CONDUCTS AND SUPPORTS SPECIFICALLY ASSIGNED ADVANCED DEVELOPMENT EFFORTS.

...CURRENT IMPORTANT PROGRAMS

SPACE ENVIRONMENT EFFECTS ON AIR FORCE SYSTEMS
WEATHER IMPACT ON AIR FORCE SYSTEMS
IONOSPHERIC SPECIFICATIONS FOR C3I SYSTEMS
OPTICAL, INFRARED AND UV BACKGROUNDS FOR SURVEILLANCE SYSTEMS
GEODETIC AND EARTH MOTION EFFECTS ON STRATEGIC MISSILE CEP.

...FUNCTIONS/EQUIPMENT/FACILITIES

CONDUCTS RESEARCH AND TECHNICAL DEVELOPMENT IN TERRESTRIAL AND ATMOSPHERIC SCIENCES, IONOSPHERIC, OPTICAL, SPACE AND SOLAR PHYSICS RELATING TO AIR FORCE NEEDS, INCLUDING SPACE WEATHER SPECIFICATIONS AND FORECASTING, AND IR SIGNATURE AND BACKGROUND MODELS FOR SURVEILLANCE SYSTEM DESIGN. EQUIPMENT AND FACILITIES INCLUDE IN-HOUSE LABORATORIES; SPACE SIMULATION CHAMBERS; ROCKET AND BALLOON LAUNCH FACILITIES; AND TWO KC-135 AIRCRAFT FOR OPTICAL, UPPER ATMOSPHERIC, AND IONOSPHERIC STUDIES.

INSTALLATION: HUMAN RESOURCES LABORATORY

BROOKS AFB, TX

CDR: COL HAROLD G. JENSON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	54.123	52.274
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.875	1.684
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	56.998	53.958
TOTAL INHOUSE	12.447	12.410
TOTAL INHOUSE RDTE	12.421	12.384
ANNUAL OPERATING COST	2.257	2.251

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	192	7	102	90
CIVILIAN	212	41	120	92
TOTAL	404	48	222	182

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	73.837	71.350	42.514	187.701	10.721	122.182

...MISSION

PLAN AND EXECUTE RESEARCH, EXPLORATORY, AND ADVANCED DEVELOPMENT PROGRAMS IN TRAINING, LOGISTICS, AND MANPOWER AND FORCE MANAGEMENT.

...CURRENT IMPORTANT PROGRAMS

MANPOWER AND FORCE MANAGEMENT: SELECTION, CLASSIFICATION, RETENTION, AND MANPOWER PERSONNEL AND TRAINING REQUIREMENTS. TRAINING: FLIGHT SIM. VISUAL SIMULATION REQUIREMENTS, COMPUTER BASED INSTRUCTION, MANAGEMENT OF OJT, JOB PERFORMANCE MEASUREMENT & ARTIFICIAL INTELLIGENCE. LOGISTICS: COMBAT MAINT., AUTOMATED TECH INFO, RELIABILITY & MAINTAINABILITY DESIGN, & C2

...FUNCTIONS/EQUIPMENT/FACILITIES

RESEARCH IN SELECTION AND CLASSIFICATION TESTING (THE ARMED SERVICES VOCATIONAL APTITUDE BATTERY), OCCUPATIONAL ANALYSIS, MANPOWER MANAGEMENT AND JOB PERFORMANCE MEASUREMENT. DEVELOPMENT AND TRAINING EFFECTIVENESS ASSESSMENT OF FLIGHT TRAINING SIMULATORS AND THEIR VISUAL DISPLAYS. RESEARCH IN COMPUTER BASED INSTRUCTION. APPLICATION OF ARTIFICIAL INTELLIGENCE TO TRAINING AND AIDING. DEVELOPMENT OF COMPUTER AIDS TO INCORPORATE RELIABILITY AND MAINTAINABILITY IN INITIAL WEAPONS SYSTEM DESIGNS. INVESTIGATION INTO AUTOMATION OF THE DEVELOPMENT, TRANSFER, AND DISPLAY OF WEAPONS SYSTEM TECHNICAL DATA. BASIC RESEARCH IN THE THEORIES OF MENTAL APTITUDES, LEARNING ABILITY, AND PERCEPTUAL DIMENSIONS OF PILOT BEHAVIOR. QUICK REACTION STUDIES OF QUESTIONS POSED BY AIR FORCE MANPOWER AND PERSONNEL MANAGEMENT OFFICES.

INSTALLATION: MATERIALS LABORATORY

WPAFB, OH

DIR: DR. VINCINT J. RUSSO

CH SCI DIR:

DR. HARRIS M. BURTE

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	183.335	202.106
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.420	2.519
TOTAL ANNUAL LAB	185.755	204.625
TOTAL INHOUSE	17.647	20.296
TOTAL INHOUSE RDTE	17.640	20.296
ANNUAL OPERATING COST	2.068	2.284

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	50	3	45	5
CIVILIAN	308	60	237	71
TOTAL	358	63	282	76

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
15	172.455	4.194	182.734	359.383	276.174	35.359

...MISSION

PLAN/EXECUTE RESEARCH AND DEVELOPMENT PROGRAMS FOR MATERIALS. PROVIDE TECHNICAL AND MANAGEMENT ASSISTANCE IN SYSTEM STUDIES, ANALYSIS, DEVELOPMENT PLANNING, TEST, EVALUATION, MODIFICATION, AND OPERATION OF AERO-SPACE SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

STRUCTURAL MATERIALS FOR AEROSPACE SYSTEMS.
PROPULSION MATERIALS.
ELECTRONIC MATERIALS.
LASER-HARDENED MATERIALS.

...FUNCTIONS/EQUIPMENT/FACILITIES

MATERIALS RESEARCH AND DEVELOPMENT FACILITIES AND CAPABILITIES FOR AERO-SPACE STRUCTURES, THERMAL PROTECTION SYSTEMS, PROPULSION MATERIALS, FLUIDS, LUBRICANTS, FLUID CONTAINMENT, COATINGS, FIBERS, SENSORS, SUPER-CONDUCTORS, AND NONLINEAR OPTICS, ELECTRICAL COMPONENTS, NON-DESTRUCTIVE EVALUATION, POLYMERS, MOLECULAR COMPOSITES, NONMETALIC MATRIX COMPONENTS ELASTOMERS, METALS, ALLOYS, METAL MATRIX COMPOSITES, METAL PROCESSING, CERAMICS, INTERMETALLICS, STATIC AND DYNAMIC BEHAVIOR, ELECTRONIC/PHY-SICAL/CHEMICAL ANALYSIS, FAILURE ANALYSIS, COMPUTURE-AIDED MANUFACTURING POWDER METALLUGY, AND OTHER MAJOR MATERIALS FUNCTIONS WHICH INCLUDE MANUFACTURING TECHNOLOGY, SYSTEM APPLICATIONS AND SYSTEMS SUPPORT.

INSTALLATION: OFFICE OF SCIENTIFIC RESEARCH

WASHINGTON, DC

CDR: COL ALAN J. DRISCOLL

TECH DIRECTOR: DR. JOHN O. DIMMOCK

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	290.370	278.780
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.236	0.188
TOTAL OTHER	4.037	4.044
TOTAL ANNUAL LAB	294.643	283.012
TOTAL INHOUSE	0.000	0.000
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	2.726	3.436

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	75	18	75	0
CIVILIAN	116	32	116	0
TOTAL	191	50	191	0

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
0	0.000	35.688	5.128	40.816	0.000	0.991	

...MISSION

MANAGES THE AF RESEARCH PROGRAM, PREVENTS TECHNOLOGICAL SURPRISE,
ASSISTS IN SOLVING TECHNOLOGICAL PROBLEMS, PROVIDES RESEARCH OPTIONS,
ENHANCES THE CONTINUED SUPERIORITY OF THE AF OPERATIONAL CAPABILITY, AND
ASSISTS IN THE TRANSITION OF RESEARCH TO DEVELOPMENT PROGRAMS.

...CURRENT IMPORTANT PROGRAMS

INTERACTIVE FLOW CONTROL

MESOMECHANICS

ENHANCEMENTS OF LIFE SCIENCE RESEARCH IN AF LABORATORIES

SENSORY NEUROPHYSIOLOGY

WAFER LEVEL ION-ELECTRONICS

...FUNCTIONS/EQUIPMENT/FACILITIES

MANAGES THE AF RESEARCH PROGRAM AND SPONSORS EXTRAMURAL RESEARCH

INSTALLATION: ROME AIR DEVELOPMENT CENTER

GRIFFISS AFB, NY

CDR: COL RAYMOND A. SHULSTAD

CHIEF SCIENTIST: DR. FRED I. DIAMOND

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	338.764	353.703
TOTAL PROCUREMENT	20.846	19.700
TOTAL O&M	64.243	63.424
TOTAL OTHER	10.500	10.800
TOTAL ANNUAL LAB	434.353	447.627
TOTAL INHOUSE	61.038	62.915
TOTAL INHOUSE RDTE	49.041	51.194
ANNUAL OPERATING COST	1.985	2.041

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	193	4	127	66
CIVILIAN	1046	63	610	436
TOTAL	1239	67	737	502

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1566	617.040	49.972	371.648	1038.660	36.628	92.798

...MISSION

RADC PLANS AND EXECUTES RESEARCH, DEVELOPMENT, TEST AND SELECTED ACQUISITION PROGRAMS IN SUPPORT OF COMMAND, CONTROL, COMMUNICATIONS AND INTELLIGENCE (C3I) ACTIVITIES. TECHNICAL AND ENGINEERING SUPPORT WITHIN AREAS OF TECHNICAL COMPETENCE IS PROVIDED TO ESD PROGRAM OFFICES (POS).

...CURRENT IMPORTANT PROGRAMS

PHOTONICS
LOW OBSERVABLES
BATTLE INFORMATION MANAGEMENT/DECISION AIDS
COMPUTATIONAL SCIENCE/SOFTWARE ENGINEERING
ELECTRO-OPTICAL SURVEILLANCE AND DEVICES

...FUNCTIONS/EQUIPMENT/FACILITIES

HQ RADC, GRIFFISS AFB; OPERATING LOCATIONS - HANSCOM AFB 2 DIRECTORATES
AVA, NY; ONTARIO, NY; VERONA, NY; NEWPORT, NY; STOCKBRIDGE, NY;
YOUNGSTOWN, NY; FORESTPORT, NY; QUAKER HILL, NY; VIENNA, NY;
IPSWICH, MA; PROSPECT HILL, MA
IN-HOUSE FACILITIES: RECONNAISSANCE EXPLOITATION FACILITY, CRYO-LABORATOR
FACILITY, DIGITAL COMMUNICATIONS EXPERIMENTAL FACILITY, PHOTONICS CENTER,
RELIABILITY ANALYSIS CENTER, EXPERIMENTAL PHOTOGRAMMETRIC FACILITY, ECCM
AND SIGNAL PROCESSING LABORATORY, SOLID STATE DEVICE FAILURE ANALYSIS
FACILITY, ELECTRO-MAGNETIC VULNERABILITY FACILITY, SURVEILLANCE LAB,
MATERIALS SYNTHESIS AND DEVELOPMENT FACILITY RADIATION EFFECTS FACILITY,
EXPERIMENTAL DEVICE FABRICATION FACILITY

INSTALLATION: SCHOOL OF AEROSPACE MEDICINE

BROOKS AFB, TX

CDR: COL JEFFREY G. DAVIS

CHIEF SCIENTIST: DR. R.R. BURTON

PROGRAM DATA BY FISCAL YEAR (MILLIONS)

PROGRAM	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	24.027	22.644
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	4.396	3.867
TOTAL OTHER	25.894	26.392
TOTAL ANNUAL LAB	58.317	52.903
TOTAL INHOUSE	17.844	17.962
TOTAL INHOUSE RDTE	13.448	14.095
ANNUAL OPERATING COST	3.358	3.536

PERSONNEL DATA (END OF FY 1988)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	334	52	118	216
CIVILIAN	253	39	100	153
TOTAL	587	91	218	369

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
19575	426.071	90.023	182.231	698.325	54.174	28.902

...MISSION

CONDUCT EXPLORATORY RESEARCH AND DEVELOPMENT PROGRAMS IN AEROSPACE BIO-TECHNOLOGY, INCLUDES LIFE SUPPORT, AEROSPACE MEDICINE, BIOMEDICAL PROGRAMS AND RADIOBIOLOGY. PROVIDE MEDICAL EVALUATION AND CONSULTATION FOR AIRCREWS TO ASSURE RETENTION OF FLYING STATUS.

...CURRENT IMPORTANT PROGRAMS

CHEMICAL WARFARE DEFENSE
RADIATION AND DIRECTED ENERGY BIOEFFECTS
CREW READINESS AND PROTECTIVE EQUIPMENT
AEROMEDICAL ASPECTS OF AEROSPACE OPERATIONS
SPACE BIOTECHNOLOGY

...FUNCTIONS/EQUIPMENT/FACILITIES

RESEARCH IN AEROSPACE MEDICAL PROBLEMS, LIFE SUPPORT, ENVIRONMENTAL STRESS, RADIOBIOLOGY, LASER, BIOMETRICS, BIOMED ENGINEERING, RDTE ON MEDICAL EQUIPMENT AND SYSTEMS, HUMAN CENTRIFUGE, COCKPIT INTEGRATION LAB, COMMAND-CONTROL-COMMUNICATIONS (C3) WORKSTATION PERFORMANCE TEST FACILITY, CHEMICAL DEFENSE TEST FACILITY, TESTING CELLS, RESEARCH CHAMBERS, TELETHERAPY COBALT 60 RADIATION SOURCE, RADIOFREQUENCY RADIATION RESEARCH FACILITY, DIRECTED ENERGY BIOEFFECTS LABORATORY, THERMAL CHAMBER, CARDIAC CATH LAB, AEROSPACE MED SCIENCE LAB, LASER HAZARD FACILITIES AND LASER RANGE, AEROMEDICAL LIBRARY, AEROSPACE MED EVALUATION AND CONSULTATIVE SERVICES, NUCLEAR MEDICINE ACQUISITION SYSTEM, OPTICAL RESEARCH, AUDIOLOGY, VESTIBULAR STUDIES, NEUROSCIENCES LAB, PSYCOBIOLOGY, RADIOISOTOPE, AEROMED STANDARDS, MODELING, BIOMED RESEARCH.

INSTALLATION: WEAPONS LABORATORY

KIRTLAND AFB, NM

CDR: COL L. J. OTTEN III

CHIEF SCIENTIST: LTC E. OLIVER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	344.412	345.341
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.247	0.290
TOTAL OTHER	25.040	24.038
TOTAL ANNUAL LAB	369.699	369.669
TOTAL INHOUSE	72.997	72.583
TOTAL INHOUSE RDTE	72.750	72.293
ANNUAL OPERATING COST	4.480	4.774

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	548	31	372	176
CIVILIAN	547	66	316	231
TOTAL	1095	97	688	407

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
90	551.000	146.000	180.000	877.000	28.540	91.000

...MISSION

RESPONSIBLE FOR EXPLORATORY, ADVANCED, AND ENGINEERING DEVELOPMENT IN NUCLEAR WEAPONS EFFECTS, NUCLEAR WEAPONS SURVIVABILITY/VULNERABILITY, NUCLEAR SAFETY AND DIRECTED ENERGY WEAPON TECHNOLOGY.

...CURRENT IMPORTANT PROGRAMS

ADVANCED RADIATION TECHNOLOGY
ADVANCED WEAPON TECHNOLOGY
NUCLEAR SURVIVABILITY/VULNERABILITY ANALYSIS AND TESTING
NUCLEAR SAFETY ANALYSIS AND DESIGN CRITERIA
STRATEGIC DEFENSE INITIATIVES

...FUNCTIONS/EQUIPMENT/FACILITIES

NUCLEAR WEAPON EFFECTS SIMULATION, SAFETY, ASSESSMENT AND ANALYSIS OF WEAPONS SYSTEMS NUCLEAR HARDNESS ARE CONDUCTED IN ENGINEERING LABORATORIES AND PHYSICS LABORATORIES. SIMULATION/TESTS ON MISSILES, AIRCRAFT, AND COMPONENTS USE ELECTROMAGNETIC PULSE SIMULATORS, GAS GUNS AND X-RAY DEVICES. CIVIL ENGINEERING PROGRAMS USE SHOCK TUBES AND HIGH EXPLOSIVES FOR SIMULATION OF NUCLEAR BLAST AND SHOCK. LASER SYSTEMS DEVELOPMENT USES LASER/OPTICS LABORATORIES AND TEST RANGES WITH HIGH POWER DEVICES. A TECHNICAL LIBRARY, METALLURGY AND METEOROLOGY LABORATORIES, THE AIR FORCE SUPER-COMPUTER CENTER, WITH REMOTE ACCESS TERMINALS AND MULTI-CHANNEL SENSING/RECORDING AND DATA REDUCTION, SUPPORT ALL REQUIRING RDTE PROGRAMS.

INSTALLATION: WESTERN SPACE AND MISSILE CENTER

VANDENBERG AFB, CA

CDR: COL ORLANDO C. SEVERO, JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	0.000	0.000
TOTAL PROCUREMENT	7.606	10.011
TOTAL O&M	81.518	81.628
TOTAL OTHER	11.605	11.251
TOTAL ANNUAL LAB	100.729	102.890
TOTAL INHOUSE	87.514	90.006
TOTAL INHOUSE RDTE	0.000	0.000
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1988)				NON- PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	541	4	188		353
CIVILIAN	522	0	121		401
TOTAL	1063	4	309		754

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
421	1538.080	1224.352	844.146	3606.578	227.000	0.000

...MISSION

OPERATE THE WESTERN TEST RANGE TO SUPPORT FIELD TEST AND LAUNCH
OPERATIONS FACILITIES FOR A VARIETY OF GOVERNMENT RANGE USERS.
SUPPORTS OTHER DOD TEST RANGES DURING SPACE, MISSILE AND AIRCRAFT OPS.

...CURRENT IMPORTANT PROGRAMS

MINUTEMAN III OPERATION TESTING PROGRAM
PEACE KEEPER MISSILE SYSTEM
SPACE LAUNCH PROGRAMS USING TITAN, ATLAS AND SCOUT BOOSTERS
RANGE SUPPORT TO BALLISTIC AND GUIDED MISSILES AND AERONAUTICAL PROGRAMS
SMALL ICBM SYSTEM TEST INCLUDING TRIDENT II

...FUNCTIONS/EQUIPMENT/FACILITIES

WSMC CAPABILITIES INCLUDE TEST LAUNCH AND RANGE SUPPORT.
TEST LAUNCH INCLUDES: ASSEMBLY AND PRELAUNCH TESTING OF LAUNCH VEHICLE
SYSTEMS USING ATLAS, TITAN, MINUTEMAN AND COMMERCIAL BOOSTERS.
PAYLOADS AND VEHICLE INTEGRATION/CHECKOUT AND LAUNCH CONTROL SAFETY.
WESTERN TEST RANGE SUPPORT INCLUDES NEAR AND FAR TERM RANGE INSTRUMENTA-
TION PLANNING AND DATA GATHERING ON BALLISTIC/SPACE GUIDED MISSILE/
AIRCRAFT AND OTHER TESTS AT UPRANGE AND DOWNRANGE LOCATIONS. LAUNCH
AZIMUTHS VARY FROM 140 TO 313 DEGS. AERO TESTS ARE CONDUCTED IN AN
INSTRUMENTED OFFSHORE OPERATING AREA. LAUNCH FACILITIES AND RANGE
INSTRUMENTATION CAN BE RECONFIGURED TO MEET PROGRAM REQUIREMENTS.

INSTALLATION: 4950TH TEST WING

WPAFB, OHIO

CDR: COL F. C. GIDEON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	95.815	89.741
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.131	0.130
TOTAL OTHER	37.838	35.970
TOTAL ANNUAL LAB	133.784	125.841
TOTAL INHOUSE	64.044	62.364
TOTAL INHOUSE RDTE	63.913	62.234
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	847	1	115	732
CIVILIAN	829	0	130	699
TOTAL	1676	1	245	1431

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
400	20.800	97.700	1068.000	1186.500	25.000	49.992

...MISSION

DOD MAJOR TEST FAC. PERFORMS T&E ON MIL SYS, SUBSYS, AND COMP. OPR & MAIN ASGN TEST SUP ACFT AND ANCIL EQUIP. MANAGES A CENTRAL FAC FOR MAJ MOD OF AFSC ACFT. OPER SHOP FAC IN SUP OF CMD ACFT CLASS II MODS AND AFWAL R&D PROGMS. PROVIDES FLT TEST ENGRG. AND TECH DATA ACQ. SVCS.

...CURRENT IMPORTANT PROGRAMS

MARK XV IFF
MILSTAR FSED TERMINAL
ECCM-ADVANCED RADAR TESTBED
SONOBUOY MISSILE IMPACT LOCATION SYSTEM (SMILS)
ARGUS SUPPORT

...FUNCTIONS/EQUIPMENT/FACILITIES

TEST SUPPORT AIRCRAFT (ARIA) PROVIDE GLOBAL SUPPORT FOR ALL AFSC MAJOR CLASS II AIRCRAFT. MISSILE LAUNCH/REENTRY TRACKING AND DATA RELAY. 1700 SQ MILE RESTRICTED TEST AREA IN OHIO. FLIGHT TEST ENGINEERING (AERO-MECH, AVIONICS, ANALYSIS, INSTRUMENTATION). TEST DATA ACQUISITION/PROCESSING/ANALYSIS. 2 OPERATIONAL SQS (FLIGHT CREWS), 3 MAINTENANCE SQS, AND 1 DETACHMENT. SPECIALIZED FABRICATION AND MODELING EQUIPMENT. COMPUTER AIDED DESIGN/MANUFACTURING (CAD/CAM) CAPABILITY. COMPUTATIONAL FLUID DYNAMICS ANALYSIS CAPABILITY. LARGEST PMEL IN AF. ASD LABORATORY MATERIAL CONTROL ACTIVITY.

INSTALLATION: 6585TH TEST GROUP

HOLLOMAN AFB, NM

CDR: COL ROGER C. HEAD

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	45.470	44.820
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	7.168	9.800
TOTAL OTHER	9.333	9.333
TOTAL ANNUAL LAB	61.971	63.953
TOTAL INHOUSE	34.319	30.506
TOTAL INHOUSE RDTE	34.319	30.506
ANNUAL OPERATING COST	0.185	0.151

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	251	0	76	175
CIVILIAN	293	1	99	194
TOTAL	544	1	175	369

ACRES	SPACE AND PROPERTY				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7052	407.068	39.081	93.979	540.128	228.352	135.139

...MISSION

DOD FOCAL POINT FOR FLIGHT, LAB & SLED T&E OF INERTIAL GUIDANCE SYSTEMS. HIGH SPEED TESTING FOR SEAT EJECTION, IMPACT, CORROSION AND GUIDANCE SYSTEMS. RADAR CROSS SECTION AND ANTENNA MEASUREMENT OF SPACE VEHICLES, RVS, A/C;A/C SUPPORT OF IN-HOUSE & TRANSIENTS.

...CURRENT IMPORTANT PROGRAMS

ADVANCED TACTICAL FIGHTER
AMRAAM RADAR FDS FLIGHT TESTS
A/C NAVIGATION SYSTEM VERIFICATION TESTING, PROJECT 688G
JOINT STARS
PEACEKEEPER GUIDANCE SYSTEM AND COMPONENTS TESTING

...FUNCTIONS/EQUIPMENT/FACILITIES

ONE 260-INCH, ONE 120-INCH, ONE 100-INCH PRECISION CENTRIFUGE
PRECISION REFERENCE/DATA COLLECTION (ELECTRONIC/PHOTOGRAPHIC)
ENVIRONMENTAL CHAMBERS (TEMPERATURE/ALTITUDE)
INERTIAL NAV VANS
SCIENTIFIC ADPE
50799 FT DUAL-RAIL TEST TRACK
5 BLOCKHOUSES
9000 FT RAINFIELD, 2000 FT BALLISTIC RAINFIELD
150MHZ TO 95GHZ RCS MEASUREMENT, ANTENNA PATTERN MEASUREMENT
R&D MACHINE/FABRICATION SHOP
MODEL MAKING
PRECISION AIRBORNE/GROUND TEST FACILITY

INSTALLATION: ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE BETHESDA, MD

CDR: COL GEORGE W. IRVING III

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLIONS)	
	1988 (Actual)	1989 (ACT+EST)
TOTAL RDTE	16.137	15.546
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	3.805	3.938
TOTAL ANNUAL LAB	19.942	19.484
TOTAL INHOUSE	16.137	15.546
TOTAL INHOUSE RDTE	16.137	15.546
ANNUAL OPERATING COST	3.435	3.524

PERSONNEL	PERSONNEL DATA (END OF FY 1988)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	92	25	47	45
CIVILIAN	203	48	98	105
TOTAL	295	73	145	150

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
10	61.750	31.057	24.901	117.708	0.000	19.450

...MISSION

THE MISSION OF AFRRRI SHALL BE TO CONDUCT RESEARCH IN THE FIELD OF RADIOBIOLOGY AND RELATED TO MATTERS ESSENTIAL TO THE OPERATIONAL AND MEDICAL SUPPORT OF THE DEPARTMENT OF DEFENSE AND THE MILITARY SERVICES.

...CURRENT IMPORTANT PROGRAMS

DEFINE PHYSIOLOGICAL/PATHOLOGICAL RESPONSE IN HUMANS TO RADIATION.
ASSESS EFFECTS OF COMBINED INJURIES, MILITARY FORCES/NONCOMBATANTS.
DATA FOR PREDICTION OF COMBAT INEFFECTIVENESS AND CASUALTY PRODUCTION.
TREATMENT METHODS FOR CASUALTIES FROM RADIATION/COMBINED INJURY.
INSTRUCTION TO ARMED SERVICES ON TREATMENT OF NUCLEAR CASUALTIES.

...FUNCTIONS/EQUIPMENT/FACILITIES

FUNCTIONS: OPERATE FACILITIES FOR CONDUCTING RADIOBIOLOGY RESEARCH AND DISSEMINATING RESULTS: CONDUCT ADVANCED TRAINING: PROVIDE ANALYSIS CONSULTATION ON BIOEFFECTS OF RADIATION AND PERFORM OTHER SUCH RESEARCH FUNCTIONS AS REQUIRED. MAJOR EQUIPMENT INCLUDES: PULSE AND STEADY STATE NUCLEAR REACTOR, 200,000 -CURIE COBALT-60 IRRADIATOR, ELECTRON LINEAR ACCELERATOR, X-RAY AND THERATRON EXPOSURE CAPABILITY. SUPPORT SERVICES INCLUDE: MEASUREMENT OF RADIATION FIELDS, PROVISION AND CARE OF LABORATORY ANIMALS, EQUIPMENT DESIGN AND FABRICATION ASSISTANCE, REAL-TIME DATA ACQUISITION SYSTEM, TELEVISION AND FILM DOCUMENTATION OF EXPERIMENTS, PERSONNEL AND ENVIRONMENTAL MONITORING, EDITORIAL ASSISTANCE IN REPORT PREPARATION, AND A LARGE TECHNICAL LIBRARY.

APPENDIX I

DISESTABLISHMENT, ESTABLISHMENT OR CHANGES IN ORGANIZATION OR NAME

DEPARTMENT OF THE ARMY

NONE

DEPARTMENT OF THE NAVY

**Biosciences Laboratory
NSC Oakland, CA**

Disestablished

DEPARTMENT OF THE AIR FORCE

NONE

DEPARTMENT OF DEFENSE AGENCIES

NONE

**Changes since publication of Department of Defense In-House RDTE
Activities, 30 October 1987.**

APPENDIX II DEFINITIONS

1. In-House RDTE Activities - Those organizational entities performing work in any or all of the categories of research, development, test, and evaluation. The RDTE effort, however, should represent a minimum of 25 percent of the total effort of each entity reporting in order to be considered as an RDTE activity.

2. Professionals - Full-time government scientific and engineering personnel actively engaged in RDTE activities. In the case of civilians this will include all those holding positions that fall into the following categories under the Civil Service Occupational Groups and Series of Classes, General Schedule:

101 Social Science	668 Podiatrist
150 Geography	680 Dental Officer
180 Psychology	690 Industrial Hygiene
184 Sociology	695 Food and Drug Officer
190 General Anthropology	696 Consumer Safety
193 Archeology	701 Veterinary Medical Science
401 Ecology	801 General Engineering
403 Microbiology	803 Safety Engineering
405 Pharmacology	804 Fire Prevention Engineering
408 Ecology Engineering	806 Materials Engineering
410 Zoology	807 Landscape Architecture
413 Physiology	808 Architecture
414 Entomology	810 Civil Engineering
430 Botany	819 Sanitary Engineering
434 Plant Pathology	830 Mechanical Engineering
435 Plant Physiology	840 Nuclear Engineering
436 Plant Protection and Quarantine	850 Electrical Engineering
437 Horticulture	855 Electronic Engineering
440 Genetics	858 Biomedical Engineering
454 Range Conservation	861 Aeronautics Engineering
457 Soil Conservation	871 Naval Architecture
460 Forestry	880 Mining Engineering
470 Soil Science	881 Petroleum Engineering
471 Agronomy	890 Agriculture Engineering
480 General Fish & Wildlife	892 Ceramic Engineering
482 Fishery Biology	893 Chemical Engineering
486 Wildlife Biology	894 Welding Engineering
487 Animal Science	896 Industrial Engineering
493 Home Economics	1221 Patent Adviser
601 General Health	1222 Patent Attorney
602 Medical Officer	1223 Patent Classifying
660 Pharmacist	1224 Patent Examining
662 Optometrist Examining	

665 Speech Pathology and Audiology	1225 Patent Interference Examining
1226 Design Patent Examining	1382 Food Technology
1301 General Physical science	1384 Textile Technology
1306 Health Physics	1386 Photographic Technology
1310 Physics	1510 Actuary
1313 Geophysics	1515 Operations Research
1315 Hydrology	1520 Mathematics
1320 Chemistry	1529 Mathematical Statistician
1321 Metallurgy	1530 Statistician
1330 Astronomy and Space Science	1540 Cryptography
1340 Meteorology	1550 Computer Science
1350 Geology	1372 Geodesy
1360 Oceanography	
1370 Cartography	
1380 Forest Products Technology	

Military professional, both officer and enlisted, actively engaged in RDTE activities should be identified with the functions described in the above referenced civilian job series. Lawyers, accountants, chaplains, social workers, and educators should be excluded.

3. Technicians - Generally nonprofessionals working on an RDTE project or program in support of a professional. In the case of civilians, it will include, but will not necessarily be limited to, those holding positions that fall into the following categories of the Civil Service Occupational Groups and Series of Classes, General Schedule:

102 Social Science Technician	688 Sanitarian
181 Psychological Technician	698 Environmental Health Technician
404 Biological Technician	699 Health Technician
421 Plant Protection Technician	704 Animal Health
455 Range Technician	802 Engineering Technician
458 Soil Conservation Technician	817 Surveying Technician
462 Forestry Technician	818 Engineering Drafting
603 Physician Assistant	856 Electronics Technician
621 Nurse Assistant	895 Industrial Engineering Technician
622 Medical Supply Aid	1202 Patent Technician
625 Autopsy Attendant	1311 Physical Science Technician
636 Rehabilitation Therapy Asst	1316 Hydraulic Technician
642 Nuclear Medicine Technician	1341 Meteorological Technician
644 Medical Technologist	
645 Medical Technician	
646 Pathology Technician	
647 Medical Radiology Technician	
648 Therapeutic Radiological Technologist	
649 Medical Machine Technician	
650 Medical Technical Assistant	
661 Pharmacy Technician	

664 Restoration Technician	1371	Cartographic Aid
667 Orthotist and Prosthetist	1374	Geodetic Technician
669 Medical Record Librarian	1521	Mathematics
681 Dental Assistant		Technician
682 Dental Hygienist	1531	Statistical
683 Dental Laboratory Technician		Clerical & Administrative
684 Public Health Dental Hygienist	1541	Cryptoanalysis

Discretion will have to be exercised by each RDTE activity in determining the number of military technicians. Generally, they should follow the guidelines established in defining civilian technicians and can be identified in DOD 1312.1-E.

4. Real Property Cost - Each reporting activity will be responsible for determining and reporting the cost of real property. This cost should be established in accordance with the guidelines and definitions in DOD Instruction 4165.14. This should also include the cost of installed equipment.

5. Equipment Cost - Each reporting activity will be responsible for determining and reporting the cost of personal property. This cost should be established in accordance with the guidelines and definitions in DOD Instruction 4165.14. This should also include the cost of installed equipment.

6. Space - The data to be furnished should include only walled and roofed building space. It should not include such things as parking lots, open storage areas, lean-tos, etc. The source of data may be the annual report submitted in compliance with the requirements of DOD Instruction 4165.14.

7. In-House Obligations - Obligations reported under this category are for activities performed, or to be performed, by the organizational entity. Their work is carried on directly by their own personnel. Particular care should be taken to include under in-house performance the cost of supplies and equipment essentially of an off-the-shelf nature that are procured for use in in-house research and development, plus such things as travel, publications, and other types of services in support of in-house functions and M.P.A. Excluded from the in-house total are expenses for planning and administering programs by DOD personnel of contracts and grants for out-of-house work and M.C.A.

8. Out-Of-House Obligations - Obligations reported under this category are for activities performed, or to be performed, by other than the organizational entity. Out-of-house performers may include other departmental or DOD organizational entities, industrial firms, educational institutions, not-for-profit institutions, and private individuals. Included as out-of-house work are all expenses paid the out-of-house performers, as well as

the expenses incurred in planning and administering these programs by personnel of the organizational entity. This would also include travel and other supporting services.

9. Annual operating Cost - This should generally reflect the overhead cost of operating the laboratory or facility. It should include such things as costs of utilities, rents, janitorial services, guard and fire protection, support services such as supply personnel, printing, maintenance of buildings and grounds, etc. It should not include the salaries of direct labor personnel such as scientists, engineers, technicians, draftsmen, machinists, etc.

APPENDIX III

Selected Standard Abbreviations and Acronyms

AAM	-	Air-to-Air Missile	FA	-	Field Artillery
AAW	-	Antiair Warfare	FBM	-	Fleet Ballistic Missile
ADPE	-	Automatic Data- Processing Equipment	GCA	-	Ground-Controlled Appr
AEDC	-	Arnold Engineering Development Center	HF	-	High-Frequency
AFSC	-	Air Force Systems Command	IFF	-	Identification, Friend or Foe
AFWET	-	Air Force Weapons Effectiveness Testing	IR	-	Infrared
AMC	-	US Army Materiel Cmd	MPT	-	Military Potential Test
APG	-	Aberdeen Proving Gnd	NAF	-	Naval Air Facility
ASW	-	Antisubmarine Warfare	NASA	-	National Aeronautics and Space Administration
AUS	-	Army United States	NASC	-	Naval Air Systems Command
BIS	-	Board of Inspection and Survey	NAVAIR	-	Naval Air Systems Command
BW	-	Biological Warfare	NAVSEA	-	Naval Sea Systems Command
CBR	-	Chemical, Biological Radiological	NEMP	-	Nuclear Electro- Magnetic Propagation
CE	-	Chief of Engineers Army	PI	-	Product Improvement
CG	-	Commanding General	POL	-	Petroleum, Oil, Lubricants
CNO	-	Chief of Naval Operations	QA	-	Quality Assurance
COMMEL-	-	Communications Electronics	QMDO	-	Qualitative Materiel Development Objective
DA	-	Department of the Army	RDTE	-	Research, Devel, Test and Evaluation
DARPA	-	Advance Research Pro- jects Agency	RF	-	Radio Frequency
DOD	-	Department of Defense	RV	-	Reentry Vehicle
DZ	-	Drop Zone	SATS	-	Short Airfield Tactical Support
ECM	-	Electronic Counter- measures	SDR	-	Small Development Requirement
ED	-	Engineering Development	SI	-	Ship Installation
EDT	-	Engineering Development & Test	SP	-	Self Propelled
EEG	-	Electroencephalogram	ST	-	Service Test
EKG	-	Electrocardiogram	T&E	-	Test and Evaluation
ELINT	-	Electronic Intelligence	UDT	-	Underwater Demolition Team
EMP	-	Electromagnetic Propagation	ULMS	-	Undersea Long-Range Missile System
EMW	-	Electromagnetic Warfare	USATECOM-	-	US Army Test & Evaluation Command
EODC	-	Explosive Ordnance Disposal Center	UTTAS	-	Utility Tact Transport Aircraft System
ET	-	Engineering Artillery	USW	-	Undersea Warfare
			UV	-	Ultraviolet
			V/STOL	-	Vertical/Short Takeoff and Landing

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